

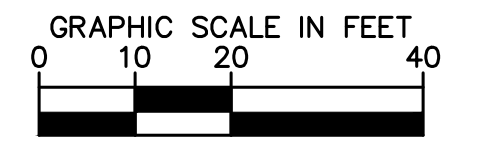
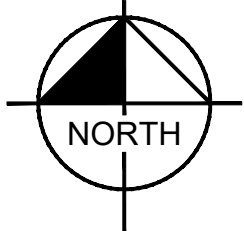
**EXISTING CONDITIONS LEGEND**

- PROPERTY LINE (LOTS 2, 3, AND 4)
- PROPERTY LINE (OFF-SITE)
- - - EXISTING EASEMENT
- EXISTING BUILDING RESTRICTION LINE
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- EXISTING PAVEMENT EDGE
- SOIL TYPE BOUNDARY
- EXISTING TREE LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING STORM DRAIN
- EXISTING GRASS SWALE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING SANITARY CLEANOUT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING TREE
- EXISTING BUILDING
- SLOPES, 15-25%
- SLOPES >25%
- EXISTING 20' SEWER AND UTILITY EASEMENT (PLAT NO. 10-1351-5-16)
- EXISTING PARKING COUNT
- CRITICAL ROOT ZONE
- NOISE STUDY LINE

**EXISTING HOWARD COUNTY SEWER & UTILITY EASEMENT**

LINE	LENGTH	BEARING
L1	69.93'	N36°14'52.63"E
L2	5.00'	S53°45'07.37"E
L3	8.54'	N36°14'52.63"E
L4	89.09'	N3°38'15.63"E
L5	91.19'	S3°38'15.63"W
L6	11.46'	N36°14'52.63"E
L7	5.00'	S53°45'07.37"E
L8	60.07'	N36°14'52.63"E

**EXISTING CONDITIONS PLAN**  
SCALE: 1"=20'



3904 BOSTON STREET, SUITE 202  
BALTIMORE, MD 21224  
CONTACT: JEFF SMITH, P.E.  
PHONE: 443-743-3470  
WWW.KIMLEY-HORN.COM

GLOBAL NOVARE, INC.  
P.O. BOX 27006  
BALTIMORE, MD 21230  
PHONE: 443-668-2527

No.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
HOWARD COUNTY, MARYLAND  
TAX MAP NO. 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000  
SCALE: 1" = 20'  
DATE: 03/08/2024  
DESIGNED BY: MZM  
DRAWN BY: MZM  
CHECKED BY: JBS



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO: 31373 EXP: 01/21/2025

**FINAL PLAN**

**BADART SUBDIVISION  
ZONING - R-SC**

**6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.**

HOWARD COUNTY MARYLAND

**EXISTING  
CONDITIONS  
PLAN**

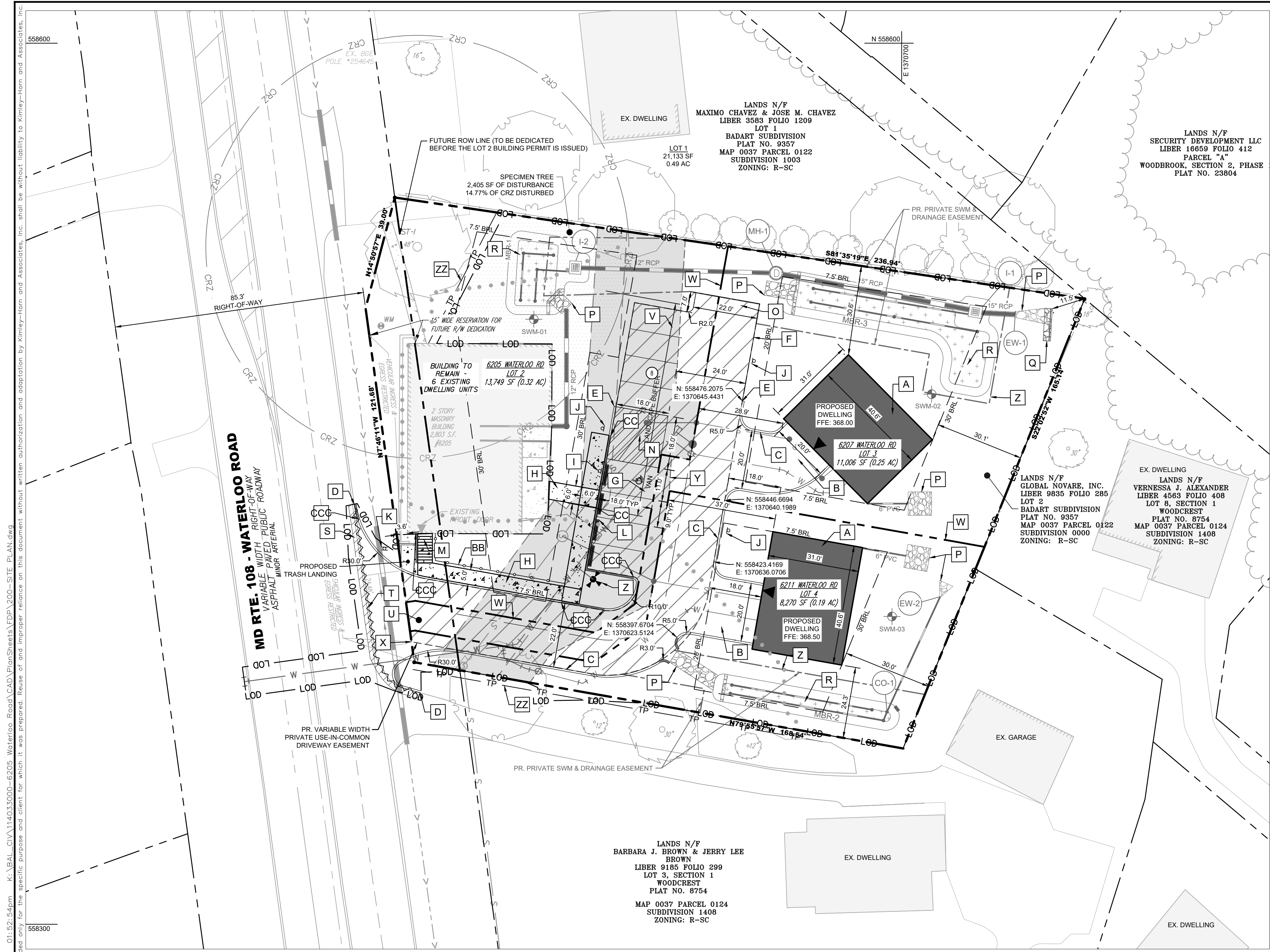
CALL 48 HOURS BEFORE YOU DIG  
IT'S THE LAW! DIAL 811  
Know what's below. Call before you dig.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
County Health Officer  
Howard County Health Department

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division  
Chief, Division of Land Development  
Director

Date: 5/9/2024  
Date: 5/8/2024  
Date: 5/9/2024  
Date: 5/9/2024





### SITE LEGEND

- PROPERTY LINE (LOTS 2, 3, AND 4)
- PROPERTY LINE (OFF-SITE)
- PROPERTY LINE (SUBDIVISION)
- FUTURE R.O.W. DEDICATION
- EXISTING BUILDING RESTRICTION LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PAVEMENT EDGE
- EXISTING TREE LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING TREE
- EXISTING BUILDING
- PROPOSED BUILDING
- LIMITS OF DISTURBANCE
- PROPOSED BUILDING SETBACK
- PROPOSED CURB
- PROPOSED ESD FACILITY
- PROPOSED SIDEWALK
- PROPOSED USE-IN-COMMON ACCESS AND UTILITY EASEMENT
- PROPOSED TREE
- DISTURBANCE TO SPECIMEN TREE CRITICAL ROOT ZONE
- PROPOSED VARIABLE WIDTH DRAINAGE, WATER, AND UTILITY EASEMENT
- TREE PROTECTION
- PR. PRIVATE SWM & DRAINAGE EASEMENT

### SITE KEY NOTES

- A** PROPOSED DWELLING
- B** PROPOSED RESIDENTIAL DRIVEWAY (R-6.01)
- BB** PROPOSED HANDRAIL
- C** PROPOSED CURB AND GUTTER (R-3.01)
- CC** LIMITS OF PROPOSED FLUSH CURB AND GUTTER
- CCC** LIMITS OF PROPOSED VARIABLE HEIGHT CURB
- D** BEGINNING OF PROPOSED CURB
- E** END OF PROPOSED CURB
- F** EDGE OF PROPOSED PAVEMENT
- G** PROPOSED ADA PARKING SPACE
- H** PROPOSED SIDEWALK (R-3.05)
- I** PROPOSED ADA PARKING SIGN
- J** PROPOSED NO PARKING SIGN
- K** PROPOSED RANGE OF ADDRESS SIGN
- L** PROPOSED WHEEL STOP, TYP.
- M** PROPOSED STEPS
- N** PROPOSED FIRE DEPARTMENT TURN-AROUND AREA
- O** PROPOSED VEHICULAR TURN-AROUND AREA
- P** PROPOSED RIPRAP
- Q** PROPOSED LEVEL SPREADER
- R** PROPOSED MICRO-BIORETENTION FACILITY
- S** PROPOSED MILL AND OVERLAY
- T** PROPOSED SAWCUT
- U** PROPOSED SHA ENTRANCE TYPICAL OPEN SECTION STREET CONNECTION
- V** PROPOSED PAVING (P-1) (R-2.01)
- W** PROPOSED SUBDIVISION LOT LINE
- X** PROPOSED VARIABLE WIDTH PRIVATE USE-IN-COMMON DRIVEWAY EASEMENT FOR THE USE AND BENEFIT OF LOT 2, LOT 3, AND LOT 4
- Y** PROPOSED VARIABLE WIDTH PUBLIC DRAINAGE, UTILITY & WATER EASEMENT
- Z** PROPOSED PRIVATE SWM & DRAINAGE EASEMENT
- ZZ** PROPOSED TREE PROTECTION

### Kimley»Horn

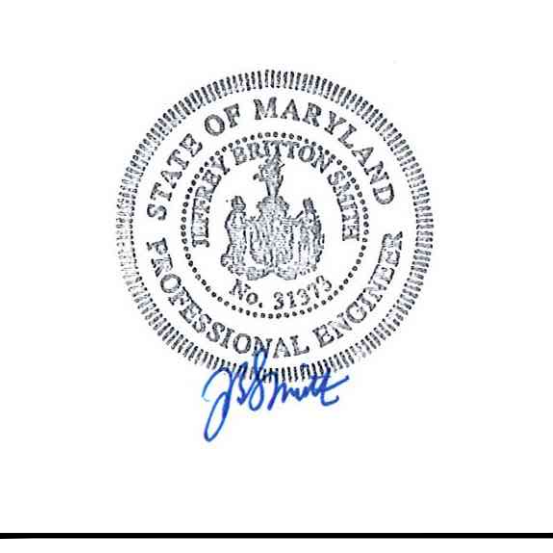
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### FINAL PLAN

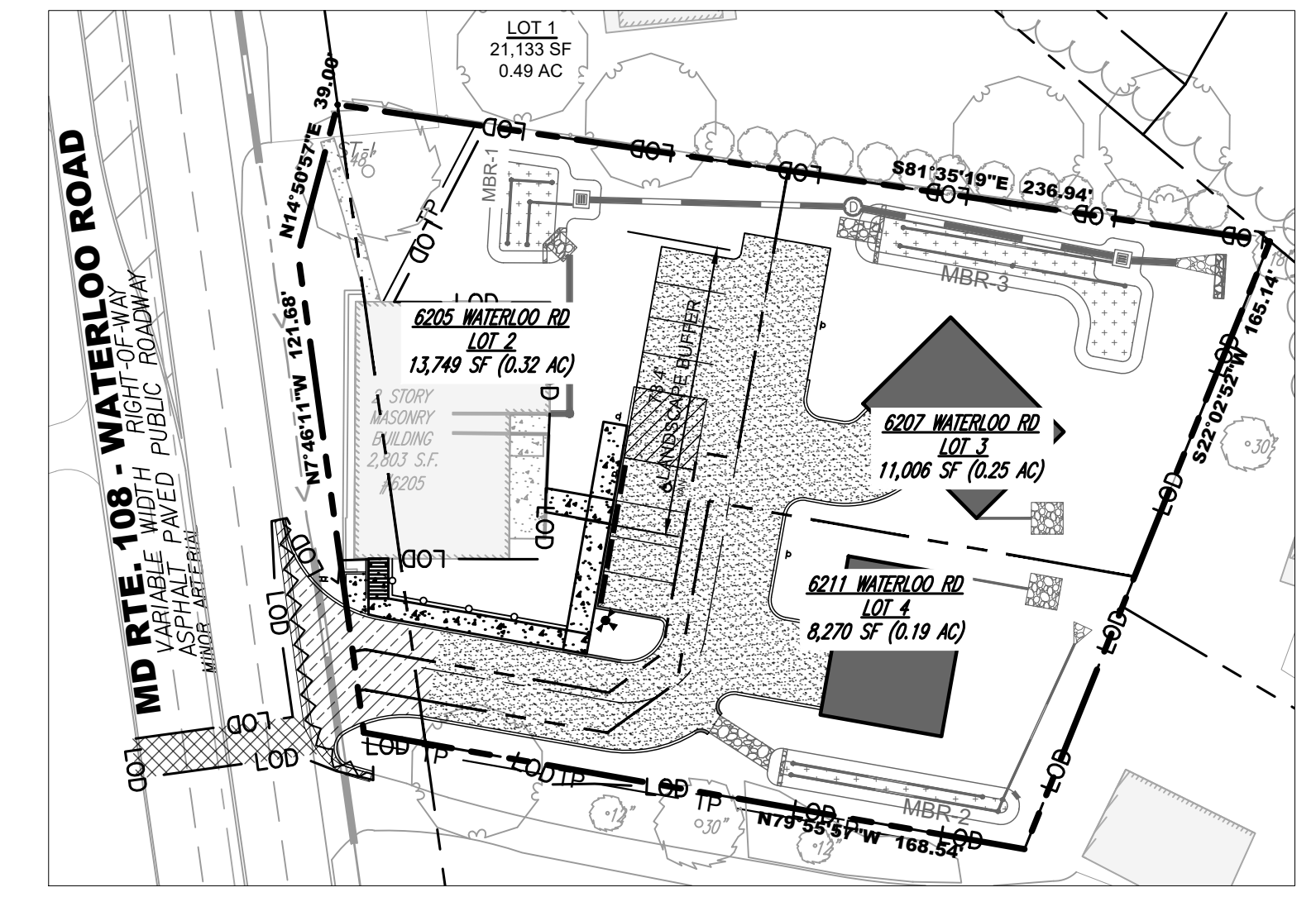
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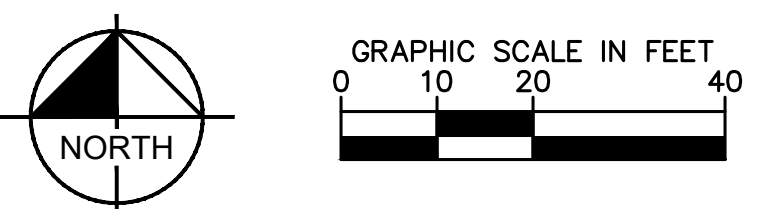
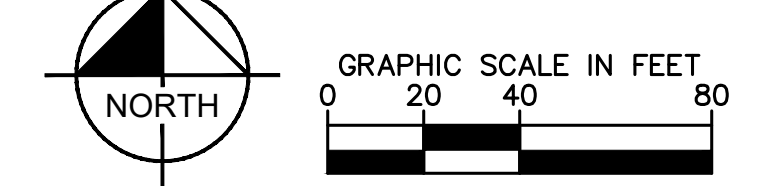
HOWARD COUNTY MARYLAND

### SITE PLAN

SHEET NUMBER  
**5 OF 23**



### PAVEMENT PLAN SCALE: 1"=40'



- GENERAL NOTES**
- THE PROPOSED DWELLING UNITS ARE CURRENTLY ORIENTED FOR THE FUTURE DEVELOPMENT WHICH WILL INCLUDE THE DEMOLITION OF THE EXISTING STRUCTURE AND PROPOSED NEW RESIDENTIAL USE.
  - FRONTAGE IMPROVEMENTS AND RIGHT-OF-WAY DEDICATION ARE NOT PROPOSED WITH THE CURRENT DEVELOPMENT. THE DEVELOPMENT RECEIVED APPROVAL WP-21-137 ON 8/23/2021 STATING THE PROPOSED SUBDIVISION WILL REQUIRE ROADWAY DEDICATION PER SECTION 18.119(g) WHICH PLACES THE NEW PROPERTY BOUNDARY IN CONFLICT WITH THE EXISTING BUILDING. AS THE EXISTING BUILDING IS TO REMAIN WITH THE PROPOSED DEVELOPMENT, A FUTURE RIGHT-OF-WAY DEDICATION (LAND RESERVATION) TO ENSURE ENOUGH SPACE FOR FUTURE BICYCLE AND/OR PEDESTRIAN IMPROVEMENTS IN THE FUTURE WILL BE REQUIRED IF AND WHEN THE EXISTING BUILDING IS TO BE REMOVED.**
  - PROPOSED LEVEL SPREADER IS PROPOSED TO CONTROL THE FACILITY OUTFALLS AND WILL NOT HAVE A DELETERIOUS IMPACT ON THE ADJACENT DOWNSTREAM PROPERTIES.
  - SPECIMEN TREE PROTECTION:
    - SEE SESC AND LANDSCAPE PLANS FOR ADDITIONAL DETAILS.
    - TO REDUCE ADVERSE IMPACTS TO THE EXISTING SPECIMEN TREE ON-SITE, THE STANDARDS AND SPECIFICATIONS IN THE HOWARD COUNTY LANDSCAPE AND FOREST CONSERVATION MANUAL, AND MD STATE FOREST CONSERVATION TECHNICAL MANUAL SHALL BE ADHERED TO ALONG WITH THE FOLLOWING:
      - MINIMIZE SOIL DISTURBANCE WITHIN THE CRZ.
      - AVOID SOIL COMPACTION: TO THE GREATEST EXTENT POSSIBLE, LIMIT CONSTRUCTION STORAGE AND TRAFFIC WITHIN THE CRZ.
      - TREE PROTECTION FENCING WILL BE INSTALLED IN LOCATIONS AS INDICATED ON THE PLANS PRIOR TO CONSTRUCTION AND WILL REMAIN UNTIL COMPLETION.
      - PROPER AND SELECTIVE ROOT PRUNING PER LATEST ARBORICULTURE AND STATE STANDARDS.

- 5. PARKING:**
- EXISTING PARKING: 15 STANDARD PARKING SPACES
  - EXISTING APARTMENT DWELLING UNITS: 6 UNITS; 8 BEDROOMS
  - PROPOSED DWELLING UNITS: 6 EXISTING APARTMENTS TO REMAIN, 2 PROPOSED SINGLE-FAMILY DWELLING UNITS
  - REQUIRED PARKING: EXISTING APARTMENTS: 1 SPACE/BEDROOM \* 8 BEDROOMS = 8 REQUIRED SPACES  
PROPOSED SINGLE-FAMILY: 2 SPACES/DU + 0.5 SPACES/DU FOR VISITORS = 5 REQUIRED SPACES  
TOTAL REQUIRED SPACES = 13 SPACES
  - PROPOSED PARKING: 7 STANDARD PARKING SPACES + 1 ADA PARKING SPACE, 4 PARKING SPACES PER EACH SINGLE FAMILY HOME IN DRIVEWAY AND GARAGE = 16 PARKING SPACES
- NOTE:** A PARKING NEEDS STUDY WAS PREPARED BY TRAFFIC CONCEPTS, INC. ON 11/01/2023 AND WAS APPROVED BY HOWARD COUNTY DIVISION OF LAND DEVELOPMENT FOR APPLICATION OF A COMBINED RESIDENTIAL & VISITOR PARKING RATIO OF 1 SPACE PER BEDROOM FOR THE EXISTING APARTMENT UNITS FROM THE STANDARD PARKING RATIO.

- LIGHT DUTY PAVEMENT - MDSHA
  - 1.5" SUPERPAVE ASPHALT MIX - SURFACE
  - 6" SUPERPAVE ASPHALT MIX - BASE
  - 6" GRADED AGGREGATE BASE
- MILL AND OVERLAY
  - 1.5" SUPERPAVE ASPHALT MIX
- P-1 PAVEMENT SECTION - PARKING BAYS AND PARKING DRIVE AISLES
  - 1.5" SUPERPAVE ASPHALT MIX FINAL SURFACE
  - 2" SUPERPAVE ASPHALT MIX BASE
  - 5" GRADED AGGREGATE BASE
- MDSHA UTILITY TRENCH REPAIR
- PROPOSED SAWCUT

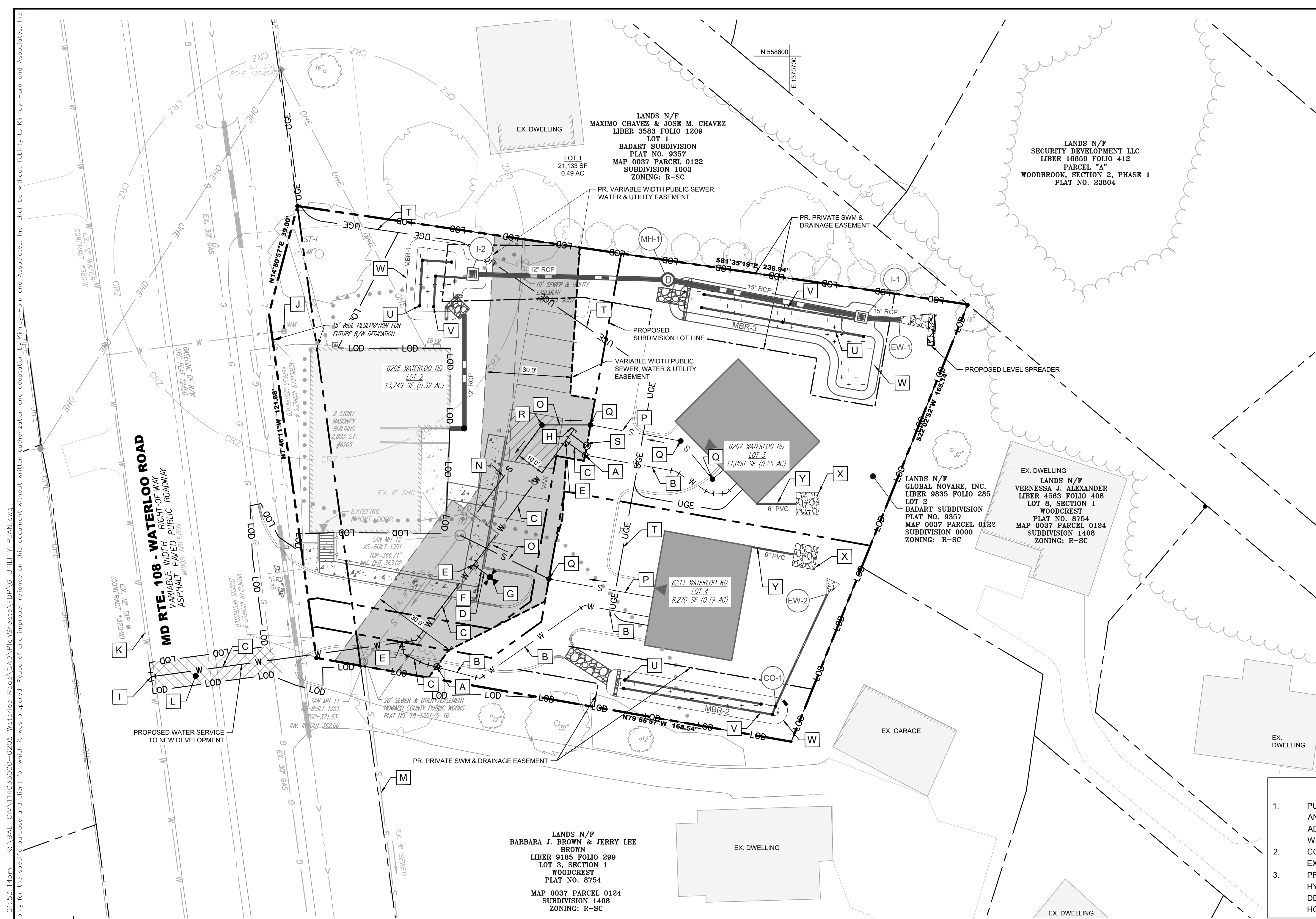
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Plotted By: Mogan, Maccenzie; Street: 6205 Waterloo Rd; Layout: 5 SITE PLAN; March 11, 2024; 01:52:54pm; K:\BAL\CV\114033000-6205 Waterloo Road\CAD\PlanSheets\PDF\200-SITE PLAN.dwg  
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UTILITY LEGEND

Table defining symbols for utility lines and features. Includes: PROPERTY LINE (LOTS 2, 3, AND 4), PROPERTY LINE (OFF-SITE), PROPERTY LINE (SUBDIVISION), FUTURE R.O.W. DEDICATION, EXISTING WATER LINE, PROPOSED PUBLIC WATER LINE, PROPOSED PRIVATE WATER LINE, PROPOSED FIRE HYDRANT, PROPOSED TAPPING SLEEVE AND VALVE, PROPOSED WATER METER, PROPOSED WATER DRAIN, EXISTING SANITARY SEWER LINE, PROPOSED PUBLIC SANITARY SEWER LINE, PROPOSED PRIVATE SANITARY SEWER LINE, EXISTING SANITARY SEWER MANHOLE, PROPOSED SANITARY SEWER CLEANOUT, EXISTING GAS LINE, EXISTING OVERHEAD ELECTRIC LINE, PROPOSED UNDERGROUND ELECTRIC LINE, EXISTING STORM DRAIN, PROPOSED STORM DRAIN PIPE, PR. PRIVATE SWM & DRAINAGE EASEMENT, PROPOSED VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT, and PROPOSED UTILITY TRENCH.

UTILITY KEY NOTES

- A PROPOSED 1-INCH WATER METER (W-3.11)
B PROPOSED 1.5-INCH COPPER WATER HOUSE CONNECTION (PRIVATE) (W-3.21)
C PROPOSED 6-INCH C-900 PVC WATER (PUBLIC)
D PROPOSED 6-INCH DIP WATER (PUBLIC)
E PROPOSED 6-INCH x 6-INCH TEE
F PROPOSED 6-INCH VALVE
G PROPOSED 6-INCH FIRE HYDRANT (W-1.11)
H PROPOSED CAP FOR FUTURE EXTENSION (WATER)
I PROPOSED 6-INCH x 12-INCH TAPPING SLEEVE AND VALVE
J EXISTING WATER METER
K EXISTING 12-INCH DIP WATER (CONTRACT #320-W)
L PROPOSED UTILITY TRENCH
M EXISTING 8-INCH SEWER (CONTRACT #10-1351)
N PROPOSED 8-INCH SDR-35 (PUBLIC)
O PROPOSED 4-INCH SDR-35 (PUBLIC)
P PROPOSED 4-INCH PVC SCHEDULE 40 SEWER HOUSE CONNECTION (PRIVATE)
Q PROPOSED 4-INCH CLEANOUT
R PROPOSED 8-INCH CLEANOUT
S PROPOSED WATER DRAIN (W-4.12)
T PROPOSED UNDERGROUND ELECTRIC LINE
U PROPOSED 4-INCH PVC OVERDRAIN
V PROPOSED 4-INCH PERFORATED PVC UNDERDRAIN
W PROPOSED MICRO-BIORETENTION FACILITY (M-6)
X PROPOSED DRYWELL RIPRAP
Y PROPOSED 6-INCH PVC ROOF DRAIN

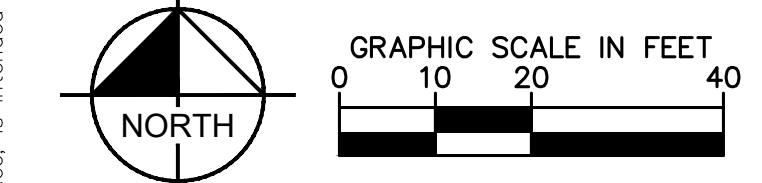
NOTES:

- 1. PUBLIC PORTIONS OF WATER MAIN, SEWER EXTENSION AND FIRE HYDRANT WILL BE CONSTRUCTED UNDER AN ADVANCED DEPOSIT ORDER (ADO) PER CONFIRMATION WITH THE HOWARD COUNTY BUREAU OF UTILITIES. CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING WORK.
2. PROPOSED WATER MAIN, SEWER EXTENSION AND FIRE HYDRANT WILL BE CONSTRUCTED UNDER AN ADVANCED DEPOSIT ORDER (ADO) PER CONFIRMATION WITH THE HOWARD COUNTY BUREAU OF UTILITIES.
3. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.

WATER CONSTRUCTION NOTES

- 1. ALL WATER MAINS SHALL BE D.I.P., CLASS 54 MINIMUM OR AWWA C900/C905 P.V.C. PIPE, CLASS DR-18 MINIMUM.
2. TOPS OF ALL WATER MAINS SHALL HAVE NOT LESS THAN 4'-0" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
5. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
6. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES AT LEAST 48 HOURS IN ADVANCE OF SCHEDULED SHUTDOWNS OF THE EXISTING WATER MAIN. SHUTDOWNS OF THE EXISTING WATER MAIN FOR NEW CONNECTIONS AND REMOVAL OF EXISTING SERVICE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1002.06 - CONNECTIONS OF THE STANDARD SPECIFICATIONS.
7. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
8. WATER SERVICE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1004.04 WATER HOUSE SERVICE AND APPURTENANCES OF THE STANDARD SPECIFICATIONS AND STANDARD DETAIL PLATE. THE MINIMUM SIZE OF A SINGLE RESIDENTIAL WHC FOR NEW RESIDENTIAL CONSTRUCTION IS 1-1/2 INCH DIAMETER WITH 1-INCH METER. INSTALLATION OF THE WATER METER IS NOT PART OF THE A.D.O. CONSTRUCTION WORK. WATER SERVICE CONNECTIONS INCLUDE PRESSURE AND LEAK TESTING, DISINFECTION, AND BACTERIOLOGICAL TESTING. (FOR COMMERCIAL METER) THE NEW WATER METER ASSEMBLY SHALL BE THE (TYPE) PER HOWARD COUNTY DETAIL PLATE W-3.24. INSTALLATION OF THE WATER METER IS NOT PART OF THE A.D.O. CONSTRUCTION WORK.
9. IF THE EXISTING WATER METER WILL BE MOVED TO THE NEW METER CONNECTION INSIDE THE BUILDING, THE CONTRACTOR SHALL CONTACT THE METER DIVISION OF THE BUREAU OF UTILITIES AT 410-313-4948 TO SCHEDULE RELOCATION OF THE METER SETTING.
10. THE ABANDONMENT OF EXISTING WATER SERVICE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1015.03 OF THE STANDARD SPECIFICATIONS. REMOVAL OF THE EXISTING CORPORATION STOP OF TAPPING SADDLE REQUIRES A SCHEDULED SHUTDOWN OF THE WATER MAIN. THE EXISTING CORPORATION STOP SHALL BE REMOVED FROM THE WATER MAIN AND THE PIPE REPAIRED WITH A COUNTY APPROVED STAINLESS STEEL FULL CIRCLE REPAIR CLAMP SUCH AS A FORD METER FS2, MUELLER 550, OR ROMAC SS2 SERIES.
11. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH DETAIL PLATE G-8.21 OF THE STANDARD SPECIFICATIONS.
12. PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS. THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL.
13. TEES, CROSSES, BENDS GREATER THAN 5 DEGREES, AND SIMILAR FITTINGS FOR USE WITH C-900 PVC WATER PIPE SHALL BE DUCTILE IRON CONFORMING TO AWWA C153.
14. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH HIGH-DEFLECTION COUPLINGS, 5 DEGREE SWEEPS OR STANDARD BENDS. NO BENDING OF PIPE OR DEFLECTION OF PVC PIPE JOINTS IS PERMITTED.
15. SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DETAILS. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL IRON VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC WATER MAINS.

UTILITY PLAN SCALE: 1"=20'



GENERAL CONSTRUCTION NOTES

- 1. FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION), THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
2. THE A.D.O. CONSTRUCTION WORK MUST BE PERFORMED UNDER THE CONTINUOUS INSPECTION OF THE HOWARD COUNTY BUREAU OF UTILITIES. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES (MR. ROY HOOD AT 410-313-4958) AT LEAST FIVE (5) DAYS PRIOR TO THE START OF ANY CONSTRUCTION FOR THIS A.D.O.
3. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AND AGENCIES AND MISS UTILITY AT LEAST TWO (2) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS.
5. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
6. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY BUREAU OF HIGHWAYS, 410-313-7450, AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER OF SEWER MAINS OR SERVICE CONNECTIONS.
7. WORK PERFORMED WITHIN MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE MSHA PERMIT ISSUED FOR THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE MARYLAND STATE HIGHWAY ADMINISTRATION, 410-313-5533, AT LEAST FIVE (5) WORKING DAYS BEFORE EXCAVATING WITHIN THE MARYLAND STATE RIGHT-OF-WAY FOR LAYING WATER OR SEWER MAINS OR SERVICE CONNECTIONS.
8. EXCAVATIONS MUST BE SUPPORTED FOR THE PROTECTION OF WORKERS, THE CONSTRUCTION WORK AREA, AND ADJACENT PROPERTY. REFER TO TEMPORARY EXCAVATION SUPPORT SYSTEMS UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS.
9. EXCAVATIONS MUST BE KEPT WELL DRAINED AT ALL TIMES; DEWATERING, DRAINAGE, AND PUMPING IS REQUIRED DURING CONSTRUCTION. REFER TO DEWATERING, DRAINAGE, AND PUMPING UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS. PUMPS MUST BE THE PROPER TYPE AND CAPACITY TO MAINTAIN A DRY WORK AREA.
10. THE USE OF STEEL PLATES TO PROTECT THE TRENCH AND ROADWAY SHALL BE AS SPECIFIED UNDER SECTION 1000.03.05, SECTION 104 AND STANDARD DETAIL PLATE G-4.02 OF THE STANDARD SPECIFICATIONS.
11. TEMPORARY AND PERMANENT REPAIR OF ROADWAY OPENINGS SHALL BE AS SPECIFIED UNDER SECTION 1000.03.08 AND STANDARD DETAIL PLATE G-401 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY PERMIT FROM THE AUTHORITY HAVING JURISDICTION. TEMPORARY PAVING SHALL CONSIST OF NOT LESS THAN TWELVE (12) INCHES OF CRUSHED STONE AND TWO (2) INCHES OF BITUMINOUS COLD PATCH MATERIAL.

SEWER GENERAL NOTES

- 1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
3. SEWER FORCE MAINS SHALL BE D.I.P. UNLESS OTHERWISE NOTED.
4. SEWER HOUSE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1009.03 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILS.
5. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED BY A GRAVITY SEWER SERVICE CONNECTION.

CALL 48 HOURS BEFORE YOU DIG 811. IT'S THE LAW! DIAL 811. Know what's below. Call before you dig.

Kimley Horn logo and address: 3904 BOSTON STREET, SUITE 202 BALTIMORE, MD 21224. CONTACT: JEFF SMITH, P.E. PHONE: 443-743-3470 WWW.KIMLEY-HORN.COM

GLOBAL NOVARE, INC. P.O. BOX 27006 BALTIMORE, MD 21230 PHONE: 443-668-2527

Table with columns for No., Date, and Revisions. It is currently empty.

6205 WATERLOO ROAD HOWARD COUNTY, MARYLAND TAX MAP NO. 37 PARCEL: 122 ZONING: R-SC FIRST ELECTION DISTRICT SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000 SCALE: 1" = 20' DATE: 03/08/2024 DESIGNED BY: MZM DRAWN BY: MZM CHECKED BY: JBS



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 31373 EXP: 01/21/2025

FINAL PLAN BADART SUBDIVISION ZONING - R-SC 6205 WATERLOO ROAD PREPARED FOR GLOBAL NOVARE, INC.

HOWARD COUNTY MD

UTILITY PLAN

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. County Health Officer: Howard County Department. APPROVED: DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: 5/9/2024. Chief, Division of Land Development: 5/8/2024. Director: 5/9/2024.







Plotted By: Moan, Mackenzie - Sheet Set: 6205 - Waterloo Rd - Layout: B - SEWER PROFILES - March 11, 2024 - 01:53:53pm - K:\BA\CD\114033000-6205 - Waterloo Road\CAD\PlanSheets\FDP\B - SEWER PROFILES.dwg  
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GLOBAL NOVARE, INC.  
P.O. BOX 27006  
BALTIMORE, MD 21230  
PHONE: 443-668-2527

NO.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
HOWARD COUNTY, MARYLAND  
TAX MAP NO: 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000  
SCALE: 1" = 20'  
DATE: 03/08/2024  
DESIGNED BY: MZM  
DRAWN BY: MZM  
CHECKED BY: JBS



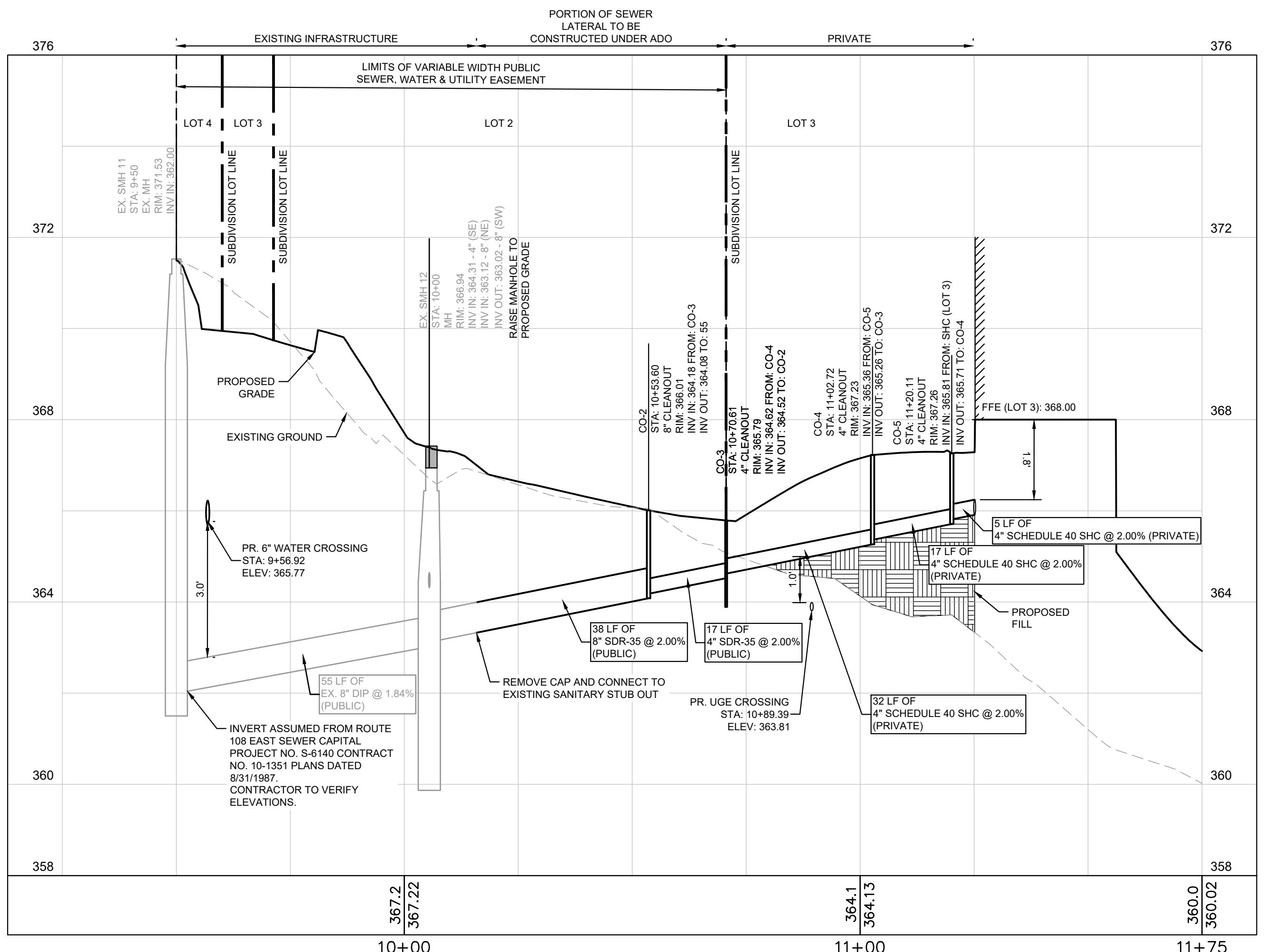
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LICENSE NO: 31373 EXP: 01/21/2025

**FINAL PLAN**  
  
BADART SUBDIVISION  
ZONING - R-SC  
  
6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.

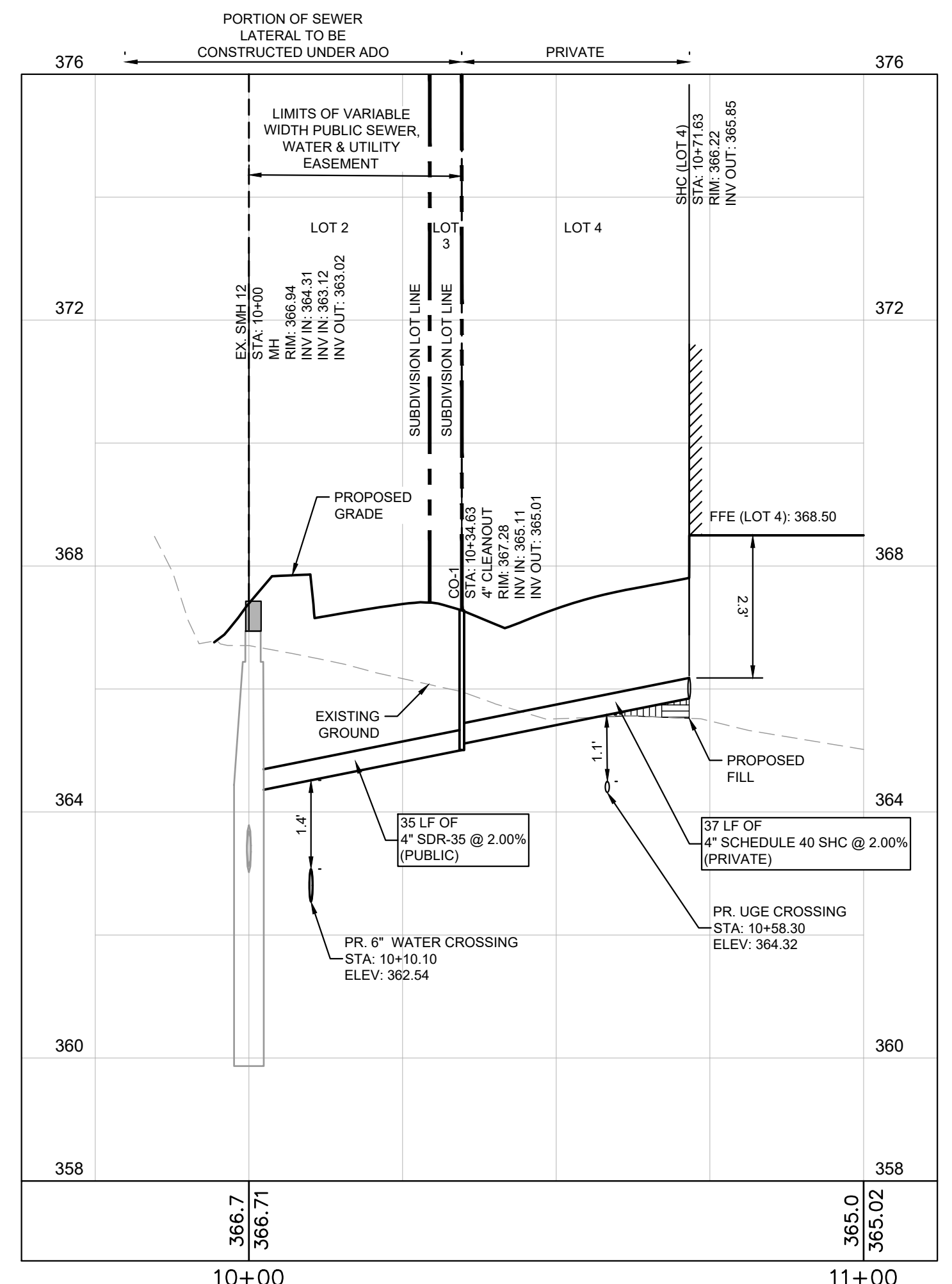
HOWARD COUNTY MARYLAND

**SEWER PROFILES**

SHEET NUMBER  
**8 OF 23**

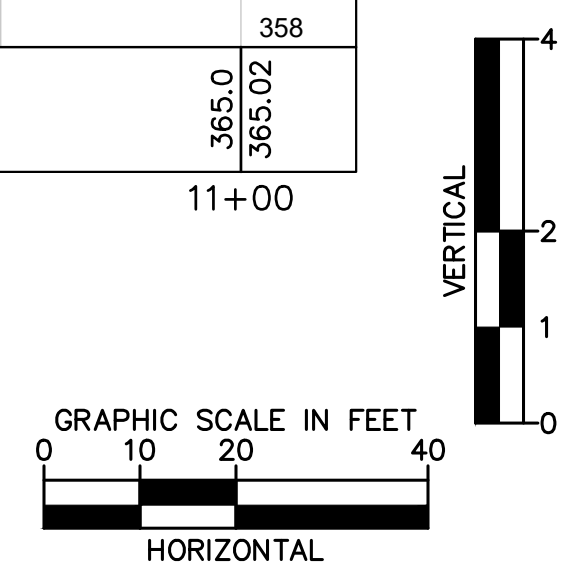


**SEWER PROFILE - LOT 3**  
SCALE: 1" = 20' H  
1" = 2' V



**SEWER PROFILE - LOT 4**  
SCALE: 1" = 20' H  
1" = 2' V

- NOTES:**
- PUBLIC PORTIONS OF WATER MAIN, SEWER EXTENSION AND FIRE HYDRANT WILL BE CONSTRUCTED UNDER AN ADVANCED DEPOSIT ORDER (ADO) PER CONFIRMATION WITH THE HOWARD COUNTY BUREAU OF UTILITIES.
  - CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING WORK.



PUBLIC STRUCTURE TABLE					
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT	STATION:	COORDINATES:
CO-1	4" CLEANOUT RIM: 367.28 INV IN: 365.11 INV OUT: 365.01	FROM SHC (LOT 4), 4" SDR-35 INV IN: 365.11 @ 2.00%	TO EX. SMH 12, 4" SDR-35 INV OUT: 365.01 @ 2.00%	10+34.63	N: 558416.8407 E: 1370615.6059
CO-2	8" CLEANOUT RIM: 366.01 INV IN: 364.18 INV OUT: 364.08	FROM CO-3, 4" SDR-35 INV IN: 364.18 @ 2.00%	TO 55, 8" PV SDR-35 / OUT: 364.08 @ 2.00%	10+53.60	N: 558470.7981 E: 1370613.1376
CO-3	4" CLEANOUT RIM: 365.79 INV IN: 364.62 INV OUT: 364.52	FROM CO-4, 4" SDR-35 INV IN: 364.62 @ 2.00%	TO CO-2, 8" SDR-35 INV OUT: 364.52 @ 2.00%	10+70.61	N: 558470.7981 E: 1370630.1472
EX. SMH 11	EX. MH RIM: 371.53 INV IN: 362.00	FROM EX. SMH 12, 8" SDR-35 INV IN: 362.00 @ 1.84%		9+50.00	N: 558387.9789 E: 1370550.9072
EX. SMH 12	MH RIM: 366.94 INV IN: 364.31 INV IN: 363.12 INV OUT: 363.02	FROM CO-1, 4" PVC INV IN: 364.31 @ 2.00% FROM 55, 8" SDR-35 INV IN: 363.12 @ 2.00%	TO EX. SMH 11, 8" SDR-35 INV OUT: 363.02 @ 1.84%	10+00.00	N: 558432.1306 E: 1370584.5318

PRIVATE STRUCTURE TABLE					
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT	STATION:	COORDINATES:
SHC (LOT 3)	S-2.22 RIM: 366.28 INV OUT: 365.91		TO CO-5, 4" SDR-35 INV OUT: 365.91 @ 2.00%	11+25.13	N: 558455.0093 E: 1370676.7327
SHC (LOT 4)	S-2.22 RIM: 366.22 INV OUT: 365.85		TO CO-1, 4" SDR-35 INV OUT: 365.85 @ 2.00%	10+71.63	N: 558410.4306 E: 1370652.0464

PRIVATE PIPE TABLE				
Pipe Name	Size	Length	Slope	MATERIAL
CO-3 TO NS_1	4"	32.115	2.00%	SDR-35
CO-1 TO SHC (LOT 4)	4"	37.000	2.00%	SDR-35

PUBLIC PIPE TABLE				
Pipe Name	Size	Length	Slope	MATERIAL
CO-2 TO CO-3	4"	17.010	2.00%	SDR-35
EX. SMH 12 TO CO-1	4"	34.632	2.00%	SDR-35
55 TO CO-2	8"	37.764	2.00%	SDR-35



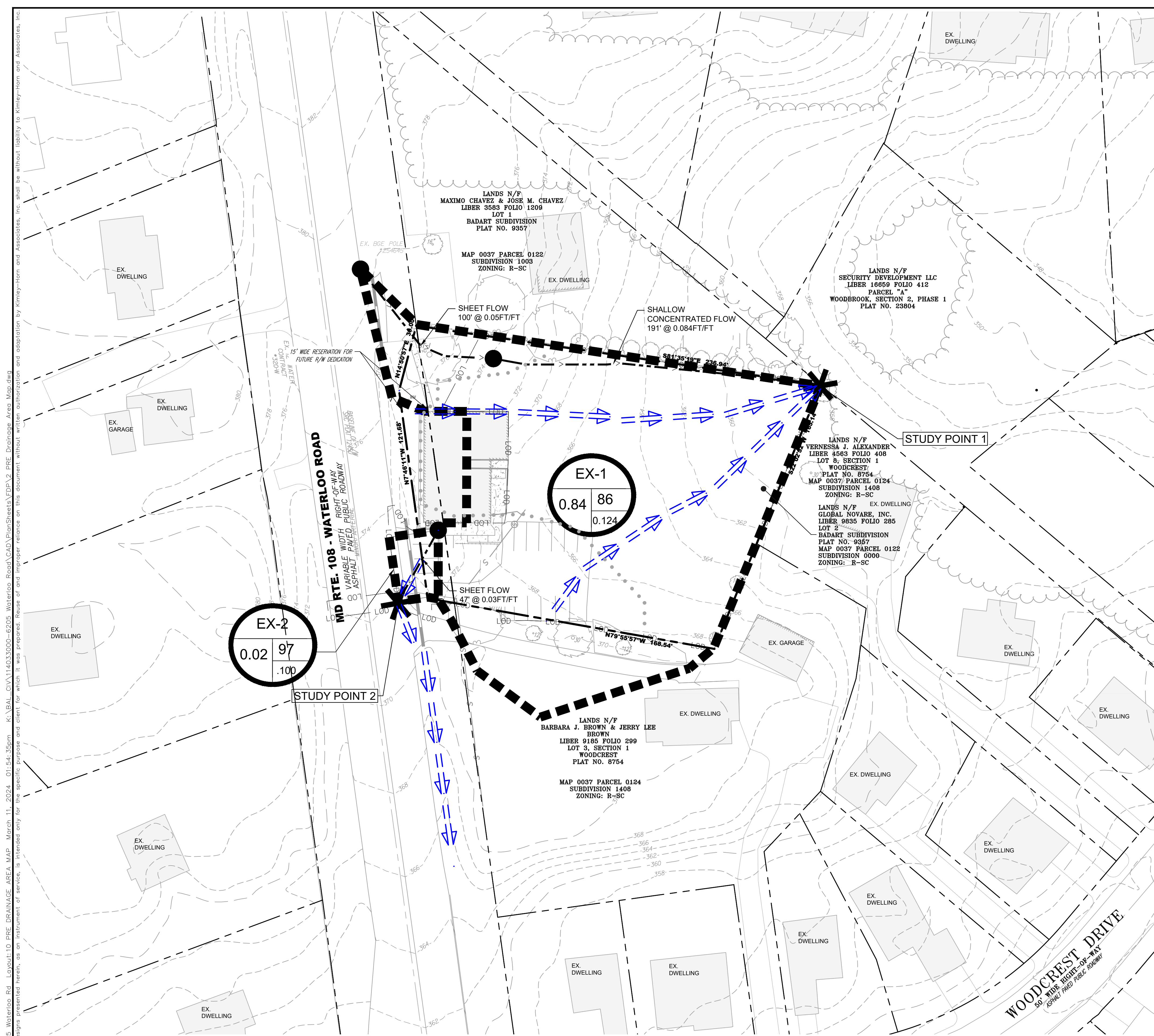
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
County Health Officer  
Howard County Health Department  
Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
(HHD) Edmondson  
Chief, Development Engineering Division  
Date 5/9/2024  
5/8/2024  
Chief, Division of Land Development  
Date  
5/9/2024  
Director  
Linda Eisenberg  
Date





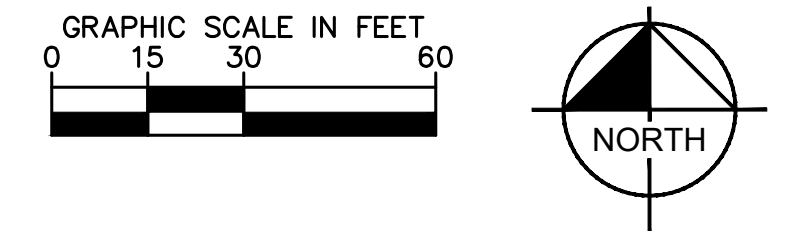




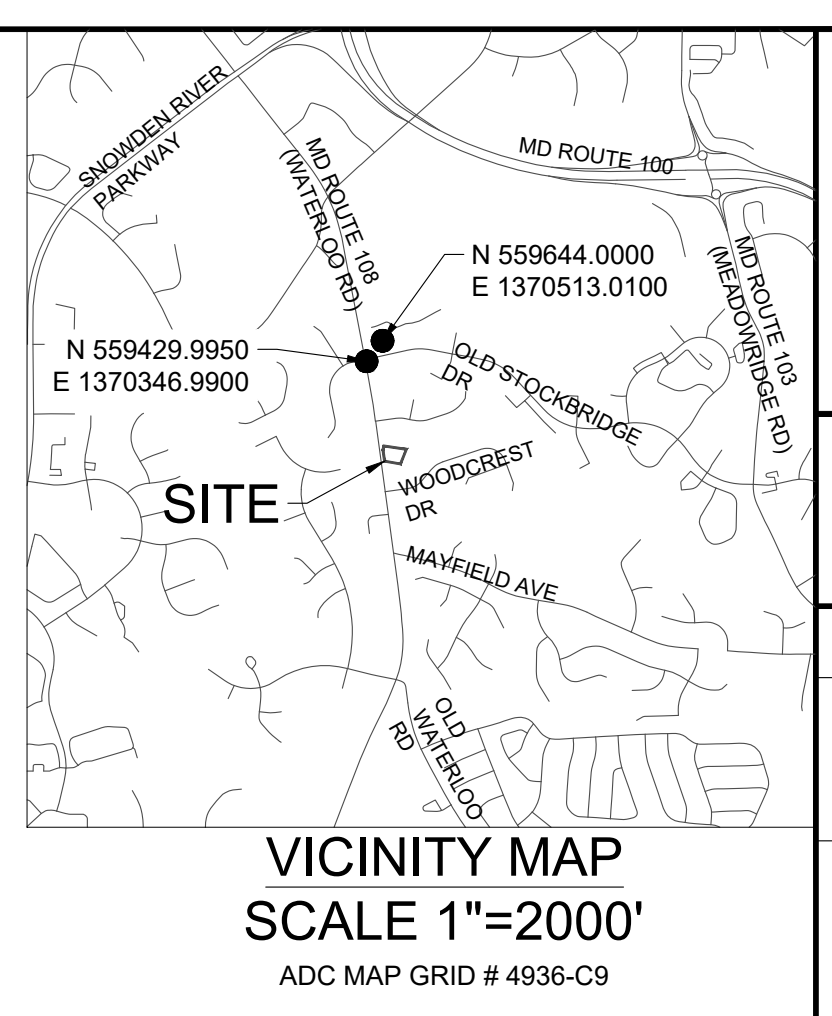
**PRE-DEVELOPMENT DRAINAGE AREA MAP LEGEND**

- DRAINAGE AREA DIVIDE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- TIME OF CONCENTRATION PATH
- TIME OF CONCENTRATION
- FLOW TYPE CHANGE
- DRAINAGE AREA ID  
AC=ACRES, CN=RUNOFF CURVE NUMBER  
Tc=TIME OF CONCENTRATION IN HOURS
- EXTREME STORM OVERLAND FLOW PATH

**PRE DRAINAGE AREA MAP**  
SCALE: 1"=30'



Point of Investigation	Drainage Area	Desc.	Existing Conditions					RCN	Tc (hr)	Q1 (cfs)	Q10 (cfs)	Q100 (cfs)
			Total (ac)	Open (sf)	Open (ac)	Impervious (sf)	Impervious (ac)					
POI-1	TOTAL	Flow to North-East Property Line	0.84	29,330	0.67	7,411	0.17	86	0.124	1.68	4.12	8.05
POI-2	TOTAL	Flow to South-West Property Line	0.02	48	0.00	938	0.02	97	0.100	0.06	0.12	0.21



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No.	REVISIONS	DATE	BY

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KHA PROJECT NO.: 114033000  
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**FINAL PLAN**

6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

**PRE DRAINAGE AREA MAP**

SHEET NUMBER  
**10 OF 23**

CALL 48 HOURS BEFORE YOU DIG  
**811**  
IT'S THE LAW! DIAL 811  
Know what's below. Call before you dig.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
County Health Officer  
Howard County Health Department

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*(Signature)* 5/9/2024  
Chief, Development Engineering Division  
Date 5/8/2024

Chief, Division of Land Development  
*(Signature)* 5/9/2024  
Director Date

Plotted By: Moisan, MacKenzie - Sheet Set: 6205 Waterloo Rd PRE DRAINAGE AREA MAP March 11, 2024 01:54:35pm K:\BAL\_CIVIL\14033000-6205 Waterloo Road\CADD\PlanSheets\FDEV2 PRE Drainage Area Map.dwg







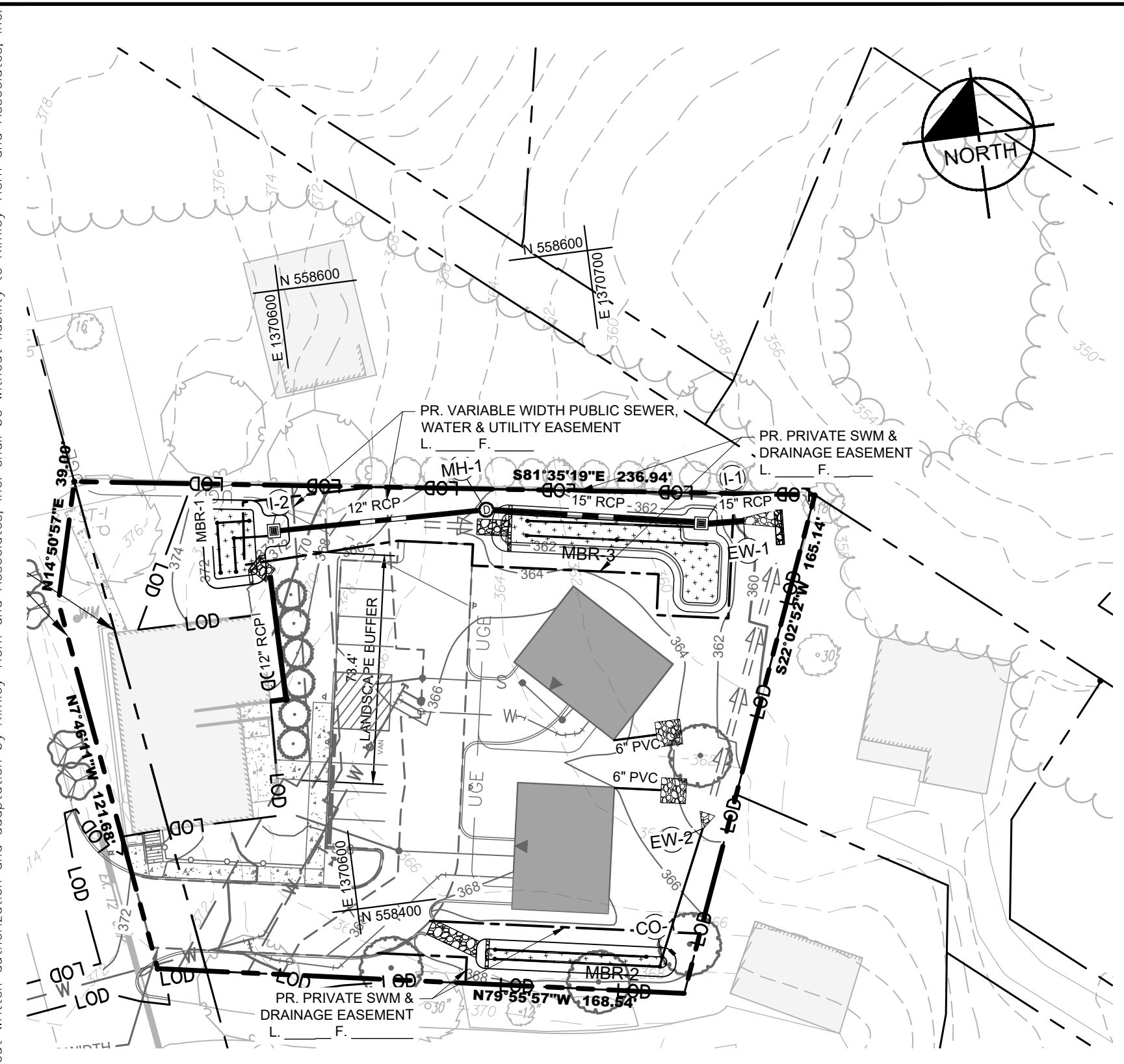




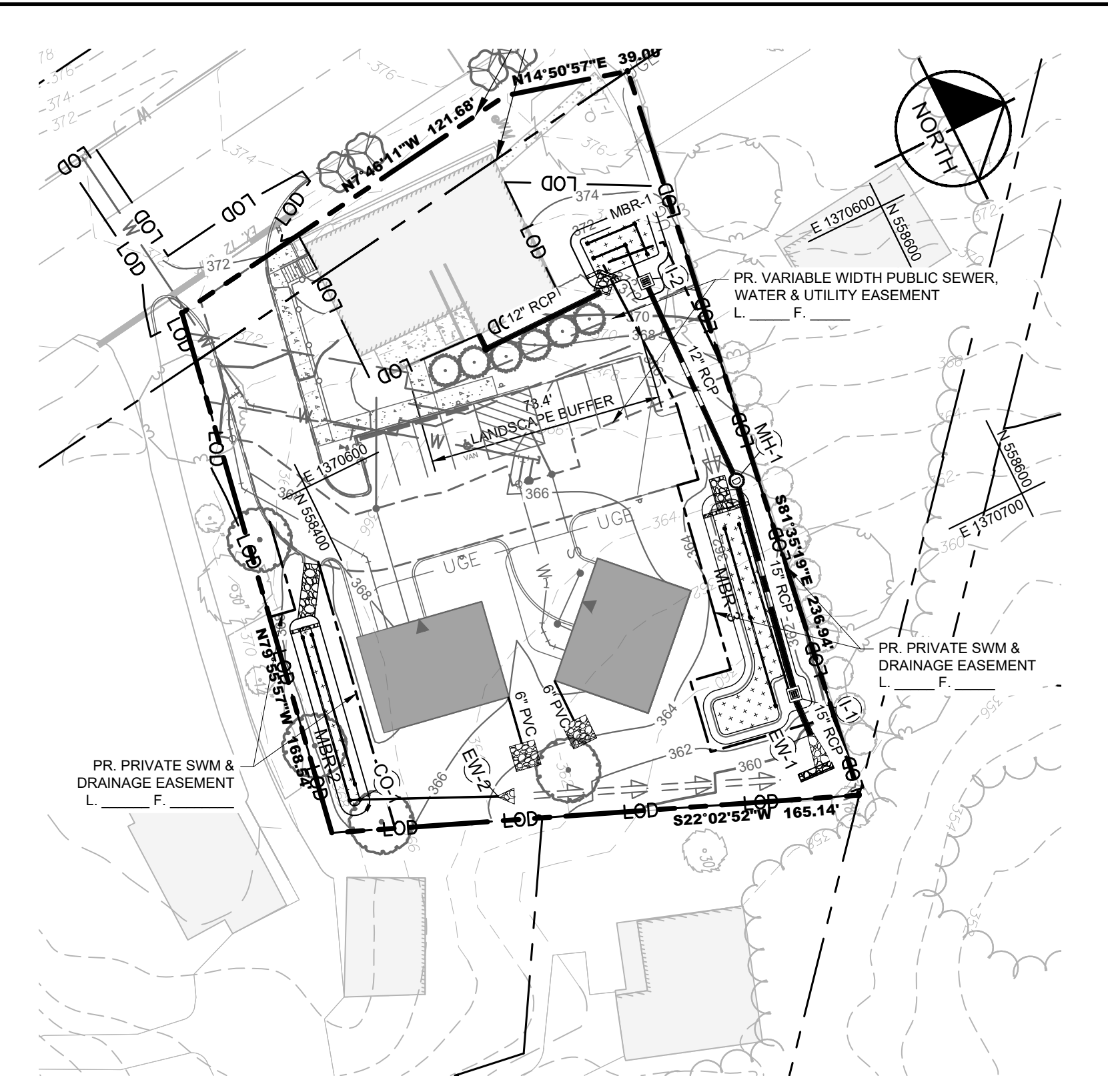




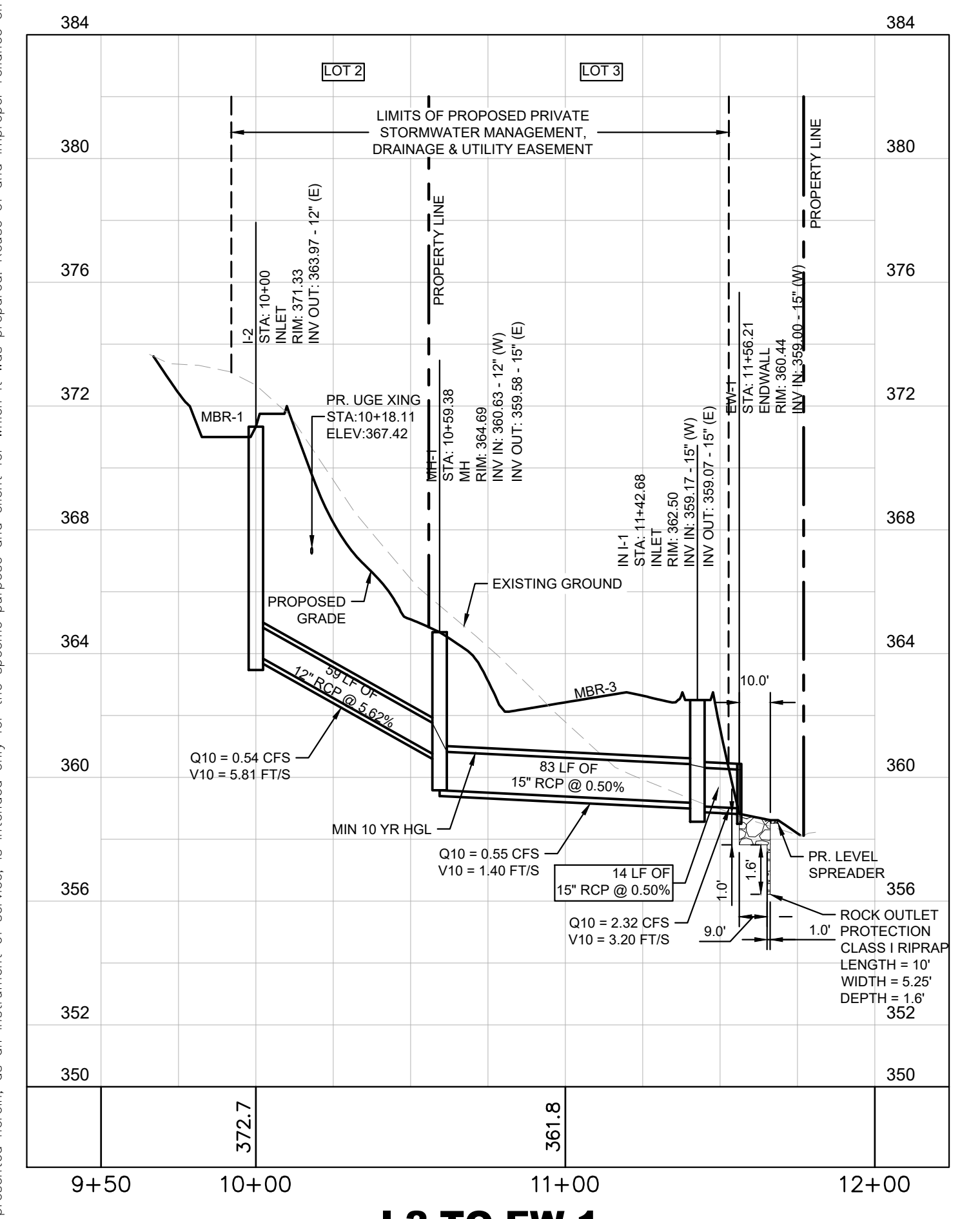
Plotted By: Mogan, Mckenzie - Sheet Set: 6205 - Stormwater Management Plan - March 11, 2024 - 01:56:07pm - K:\BAL-CIV\114033000-6205-Stormwater-Plan\Drawings\DWG\11-Stormwater-Plan\Profiles.dwg  
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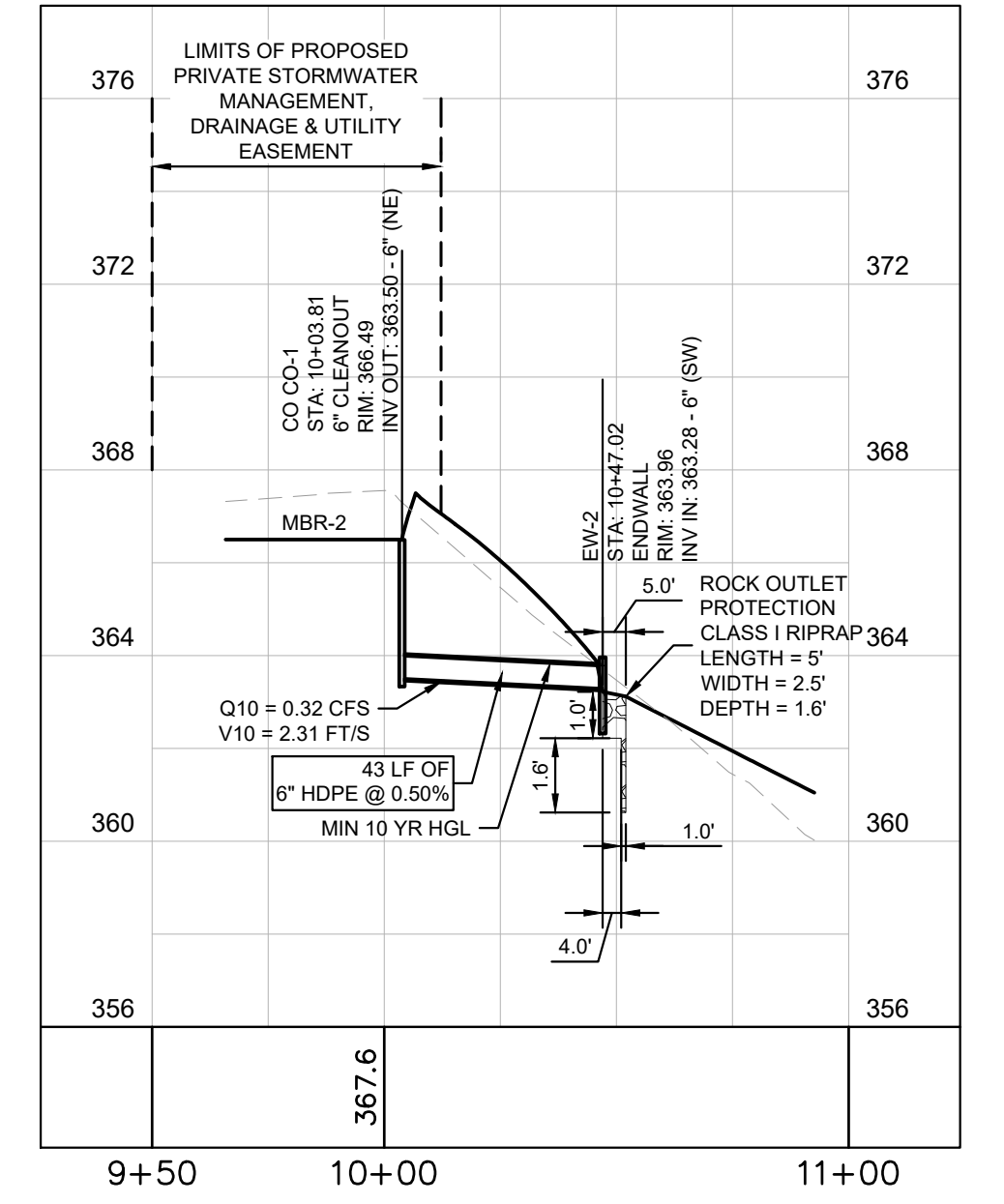
I-2 TO EW-1 PLAN VIEW  
SCALE: 1"=40'



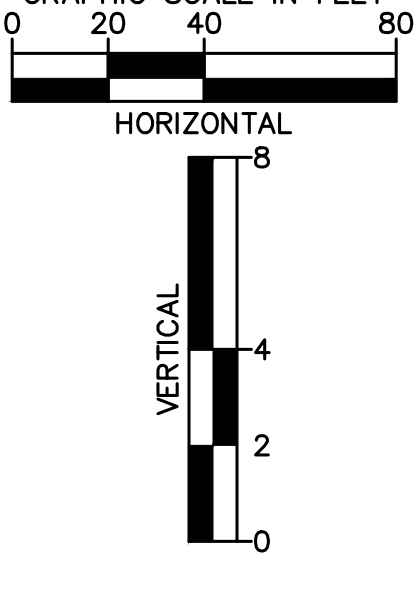
CLEANOUT TO DAYLIGHT PLAN VIEW  
SCALE: 1"=40'



I-2 TO EW-1  
SCALE: 1" = 40' H  
1" = 4' V



CLEANOUT TO DAYLIGHT  
SCALE: 1" = 40' H  
1" = 4' V



**DETAIL D-4-1-A ROCK OUTLET PROTECTION I** [ROP1]

**CONSTRUCTION SPECIFICATIONS**

- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (¾ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
- CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH OR SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLOADED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

CLASS	THICKNESS (T)
I	19 IN.
II	32 IN.
III	46 IN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION D.20

**DETAIL D-4-1-B ROCK OUTLET PROTECTION II** [ROP2]

**CONSTRUCTION SPECIFICATIONS**

- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (¾ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
- CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH OR SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLOADED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

CLASS	THICKNESS (T)
I	19 IN.
II	32 IN.
III	46 IN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION D.21

**DETAIL D-3-1 RIPRAP INFLOW PROTECTION** [RIP1]

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 18 INCHES (2 x D<sub>50</sub>) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLENDE RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION D.10

**Kimley»Horn**  
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No.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
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TAX MAP NO: 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000  
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BADART SUBDIVISION  
ZONING - R-SC  
6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

**STORM DRAIN PROFILES**

SHEET NUMBER  
**14 OF 23**

CALL 48 HOURS BEFORE YOU DIG  
IT'S THE LAW! DIAL 811  
Know what's below. Call before you dig.

**APPROVED:** FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
County Health Officer \_\_\_\_\_ Date \_\_\_\_\_  
Howard County Health Department

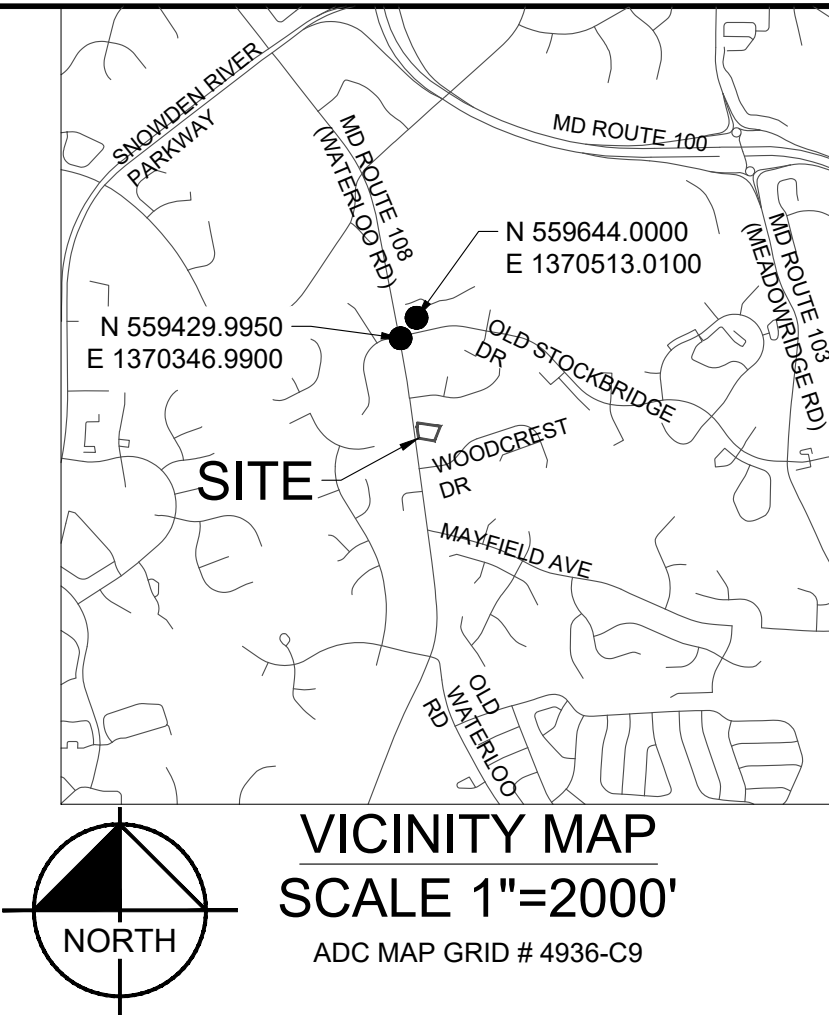
**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
Chief, Development Planning Division: *(Signature)* Date: 5/9/2024  
Chief, Division of Land Development: *(Signature)* Date: 5/8/2024  
Director: *(Signature)* Date: 5/9/2024



CLIENT: Kimley-Horn		PROJECT NO.: 02-10169	BORING NO.: SWM-01	SHEET: 1 of 1						
PROJECT NAME: 6205 Waterloo Road		DRILLER/CONTRACTOR: D And S Drilling, Inc.								
SITE LOCATION: 6502 Waterloo Road, Ellicott City, Maryland, 21043		LOSS OF CIRCULATION <input checked="" type="checkbox"/>								
NORTHING: 558506.0	EASTING: 1370574.8	STATION:	SURFACE ELEVATION: 372	BOTTOM OF CASING						
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWLOG	STANDARD PENETRATION BLOWLOG	LIQUID LIMIT	PLASTICITY LIMIT
5	S-1	SS	18 16	Topsoil Thickness [5"] (SM FILL) FILL, SILTY SAND, trace gravel, brown, moist, medium dense		367	13-12-13 (13)			
5	S-2	SS	18 14	(SC FILL) FILL, CLAYEY SAND, trace gravel, tan, moist, loose		367	9-5-4 (9)			
5	S-3	SS	18 18	(SP-SM) SAND WITH SILT, trace gravel, tan, moist, medium dense		367	8-9-12 (12)			
10	S-4	SS	18 18	(SM) SILTY SAND, reddish brown, moist, medium dense		362	11-12-13 (13)			
15	S-5	SS	18 18	END OF BORING AT 15 FT		357	13-15-15 (15)			

CLIENT: Kimley-Horn		PROJECT NO.: 02-10169	BORING NO.: SWM-02	SHEET: 1 of 1						
PROJECT NAME: 6205 Waterloo Road		DRILLER/CONTRACTOR: D And S Drilling, Inc.								
SITE LOCATION: 6502 Waterloo Road, Ellicott City, Maryland, 21043		LOSS OF CIRCULATION <input checked="" type="checkbox"/>								
NORTHING: 558480.5	EASTING: 1370710.2	STATION:	SURFACE ELEVATION: 360	BOTTOM OF CASING						
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWLOG	STANDARD PENETRATION BLOWLOG	LIQUID LIMIT	PLASTICITY LIMIT
5	S-1	SS	18 18	Topsoil Thickness [3"] (SM FILL) FILL, SILTY SAND, trace gravel, brown, moist, loose		355	2-2-2 (4)			
5	S-2	SS	18 18	(SM) SILTY SAND, brown, moist, medium dense		355	2-3-3 (3)			
5	S-3	SS	18 18	(SM) SILTY SAND, brown, moist, medium dense		355	6-7-9 (16)			
10	S-4	SS	18 18	(CL) SANDY LEAN CLAY, tan and white, moist, very stiff		350	9-10-9 (19)			
15	S-5	SS	18 18	(SM) SILTY SAND, tan, moist, medium dense		345	9-9-9 (18)			

CLIENT: Kimley-Horn		PROJECT NO.: 02-10169	BORING NO.: SWM-03	SHEET: 1 of 1						
PROJECT NAME: 6205 Waterloo Road		DRILLER/CONTRACTOR: D And S Drilling, Inc.								
SITE LOCATION: 6502 Waterloo Road, Ellicott City, Maryland, 21043		LOSS OF CIRCULATION <input checked="" type="checkbox"/>								
NORTHING: 558404.8	EASTING: 1370696.7	STATION:	SURFACE ELEVATION: 364	BOTTOM OF CASING						
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWLOG	STANDARD PENETRATION BLOWLOG	LIQUID LIMIT	PLASTICITY LIMIT
5	S-1	SS	18 18	Topsoil Thickness [2"] (CL FILL) FILL, LEAN CLAY, brown, moist, very soft		359	1-1-2 (1)			
5	S-2	SS	18 14	(SC FILL) FILL, CLAYEY SAND WITH GRAVEL, tan, moist, loose		359	2-3-3 (3)			
5	S-3	SS	18 18	(SM) SILTY SAND, trace gravel, brown, moist, medium dense		359	6-7-7 (14)			
10	S-4	SS	18 18	(SM) SILTY SAND, brown, moist, medium dense		354	9-9-9 (18)			
15	S-5	SS	18 18	END OF BORING AT 15 FT		349	4-6-7 (13)			



**Kimley»Horn**

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GLOBAL NOVARE, INC.  
P.O. BOX 27006  
BALTIMORE, MD 21230  
PHONE: 443-668-2527

No.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
HOWARD COUNTY, MARYLAND  
TAX MAP NO. 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000  
SCALE: 1" = 30'  
DATE: 03/08/2024  
DESIGNED BY: MZM  
DRAWN BY: MZM  
CHECKED BY: JBS



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO: 31373 EXP: 01/21/2025

**FINAL PLAN**

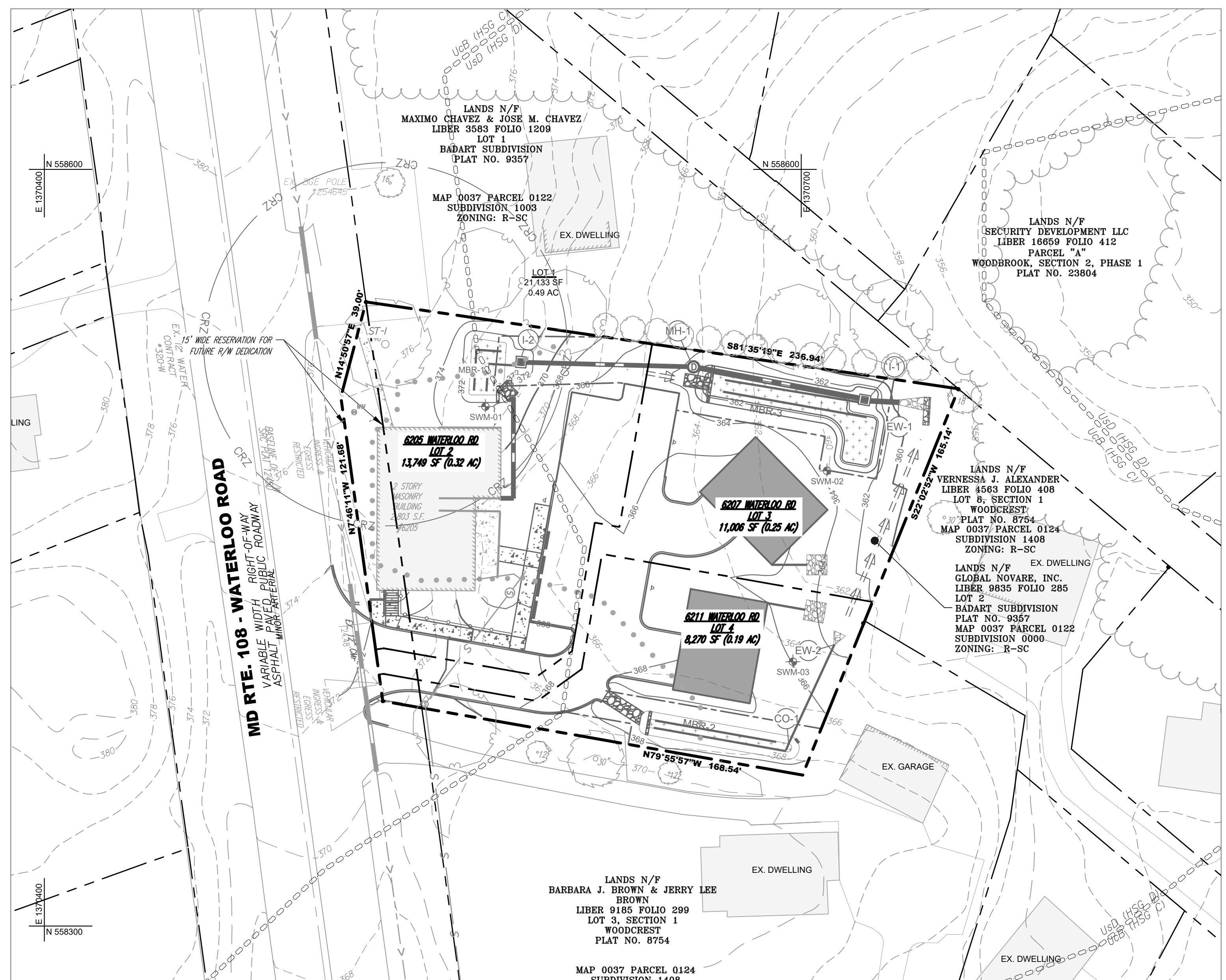
BADART SUBDIVISION  
ZONING - R-SC

6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

**SOIL MAP**

SHEET NUMBER  
**15 OF 23**



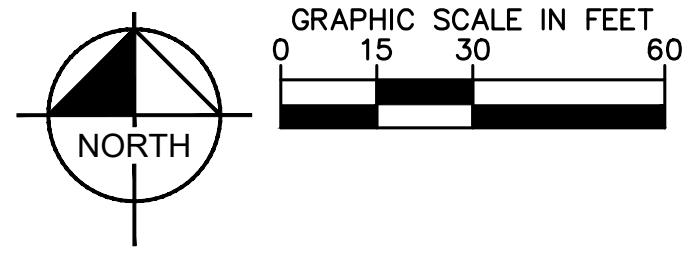
**SOILS LEGEND**

- SOIL TYPE BOUNDARY
- UcB URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES (HSG C)
- U&D URBAN LAND-SASSAFRAS-BELTSVILLE COMPLEX, 5 TO 15 PERCENT SLOPES (HSG D)

**SITE SOIL INFORMATION**

UNIT SYMBOL	DESCRIPTION	HSG	AREA (SF)	AREA (AC.)	AREA (%)	Kw
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	C	11,636	0.27	35.30%	0.43
U&D	URBAN LAND-SASSAFRAS-BELTSVILLE COMPLEX, 5 TO 15 PERCENT SLOPES	D	21,326	0.49	64.7%	0.00
TOTAL (SITE)			32,962	0.76	100.0%	

**SOIL MAP**  
SCALE: 1"=30'



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XX  
County Health Officer  
Howard County Health Department

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division  
Chief, Division of Land Development  
Director

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

Plotted By: Moan, Mackenzie. Sheet Set: 6205 Waterloo Rd Layout: 15 SOIL MAP March 11, 2024. 01:56:33pm. K:\BAL\01414033000-6205 Waterloo Road\CAD\PlanSheets\15 SOIL MAP.dwg. This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.







B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

SEEDING

1. SPECIFICATIONS

- a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

- a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OF BROADCAST SPREADERS. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
i. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER)
i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

MULCHING

1.

- MULCH MATERIALS (IN ORDER OF PREFERENCE).
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIFICALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
i. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

- a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER

3. ANCHORING

- a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD.
i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY table with columns: NO., SPECIES, APPLICATION RATE (LB/AC.), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-10-20), LIME RATE. Includes rows for BARLEY and FOXTAIL MILLET.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

- 1. GENERAL USE
a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
2. TURFGRASS MIXTURES
a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 5 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

Howard SCD Signature Block:

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District. Designed by Alexander Bratkevic 5/8/2024 Howard Soil Conservation District Date

NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

- c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

- d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY table with columns: NO., SPECIES, APPLICATION RATE (LB/AC.), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-20-20), LIME RATE. Includes rows for TALL FESCUE, KENTUCKY BLUE GRASS, and PERENNIAL RYEGRASS.

NOTE: DURING TIMES OUTSIDE OF THE INCLUDED "SEEDING DATES" SOD MAY BE USED TO ESTABLISH PERMANENT STABILIZATION.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

- 1. GENERAL SPECIFICATIONS
a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/8 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. SOD INSTALLATION
a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
3. SOD MAINTENANCE
a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/2 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

Owners/Developer Certification:

"I hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

04/09/2024 Date

Owner's/Developer's Signature James Foster, Managing Member Printed Name & Title

Design Certification:

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

04/09/2024 Date

Designer's Signature Jeff Smith, P.E. Printed Name

MD Registration No. 31373 P.E. (R.L.S., or R.L.A. (circle one))



3904 BOSTON STREET, SUITE 202 BALTIMORE, MD 21224 CONTACT: JEFF SMITH, P.E. PHONE: 443-743-3470 WWW.KIMLEY-HORN.COM

GLOBAL NOVARE, INC. P.O. BOX 27006 BALTIMORE, MD 21230 PHONE: 443-668-2527

Table with columns: NO., REVISIONS, DATE, BY. Includes a grid for tracking revisions.

6205 WATERLOO ROAD HOWARD COUNTY, MARYLAND TAX MAP NO: 37 PARCEL: 122 ZONING: R-SC FIRST ELECTION DISTRICT SECOND COUNIL DISTRICT

KHA PROJECT NO.: 114033000

SCALE:

DATE: 03/08/2024

DESIGNED BY: MZM

DRAWN BY: MZM

CHECKED BY: JBS



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 31373 EXP: 01/21/2025

FINAL PLAN

BADART SUBDIVISION ZONING - R-SC

6205 WATERLOO RD PREPARED FOR GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

SESC NOTES & DETAILS

SHEET NUMBER

17 OF 23

CALL 48 HOURS BEFORE YOU DIG 811 IT'S THE LAW! DIAL 811 Know what's below. Call before you dig.



Plotted By: Moqan, Macenzie - Sheet Set: 6205\_Waterloo Rd - Layout: 17 - SESC NOTES & DETAILS - March 11, 2024 - 01:57:24pm - k:\REAL\_DVA\14033000-6205\_Waterloo Road CAD\PlanSheets\FDP\14\_SESC NOTES & DETAILS.dwg - This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

**HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**

- 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
a. PRIOR TO THE START OF EARTH DISTURBANCE.
b. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
c. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
d. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
6. SITE ANALYSIS:
TOTAL AREA OF SITE: 0.757 ACRES
AREA DISTURBED: 0.65 ACRES
AREA TO BE ROOFED OR PAVED: 0.27 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 0.09 ACRES
TOTAL CUT: 300 CU. YDS.
TOTAL FILL: 1300 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION: SITE WITH AN ACTIVE GRADING PERMIT
7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
• INSPECTION DATE
• INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
• NAME AND TITLE OF INSPECTOR
• WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
• BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
• EVIDENCE OF SEDIMENT DISCHARGES
• IDENTIFICATION OF PLAN DEFICIENCIES
• IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
• IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
• COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
• PHOTOGRAPHS
• MONITORING/SAMPLING
• MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
• OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
• USE I AND II: MARCH 1 - JUNE 15
• USE III AND IIIP: OCTOBER 1 - APRIL 30
• USE IV: MARCH 1 - MAY 31
16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

**SEQUENCE OF CONSTRUCTION**

**INITIAL STAGE**

- 1. NOTIFY CID INSPECTOR 7 DAYS BEFORE CONSTRUCTION TO REQUEST CID PRE-CONSTRUCTION MEETING. (1 DAY)
2. STAKE OUT LIMITS OF DISTURBANCE (LOD). (1 DAY)
3. AFTER PRE-CONSTRUCTION MEETING, UPON SEDIMENT CONTROL INSPECTOR'S WRITTEN APPROVAL, CLEAR AND GRUB AS NECESSARY WITHIN THE LIMITS OF DISTURBANCE TO INSTALL THE PERIMETER CONTROLS. (3 DAYS)
4. INSTALL PERIMETER CONTROLS (STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE); ONLY CLEAR AND GRUB AREAS NEEDED TO INSTALL PERIMETER CONTROLS. (3 DAYS)
5. INSTALLATION OF OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED BEFORE DISTURBING AREAS DRAINING TO A STORMWATER MANAGEMENT FACILITY. (2 DAYS)
6. ESTABLISH PROPOSED STOCKPILE AREAS AND, AS NECESSARY, CLEAR/GRUB REMAINING SITE AREAS. (1 DAY)
a. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
b. THREE (3) CALENDAR DAYS FOR ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND
c. SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS IN THE PROJECT SITE.
9. CONTINUE TO FINAL STAGE.

**FINAL STAGE**

- 10. REPAIR, CLEAN OUT, AND/OR MAINTAIN PERIMETER SEDIMENT CONTROL PRACTICES AND INSTALL SWALE IN BACK OF HOUSES. (ONGOING)
11. BEGIN ROUGH/MASS GRADING. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT ALL TIMES, MAINTAINING DRAINAGE DIVIDES SHOWN ON PLANS. (2 WEEKS)
11.1. CONTRACTOR TO ADJUST THE SWALE AS NECESSARY IN ORDER TO ROUGH GRADE THE PERIMETER OF THE SITE.
11.2. CONTRACTOR TO ADJUST SCE'S AS NECESSARY IN ORDER TO ROUGH GRADE THE ENTRANCE LOCATION.
11.3. ESTABLISH GRADES AND ROUGH TOP ELEVATIONS FOR STORMWATER MANAGEMENT FACILITIES. FILTER MEDIA AND UNDERDRAINS SHALL NOT BE INSTALLED AT THIS TIME.
12. BEGIN CONSTRUCTION OF UTILITIES. (1 MONTH)
13. BEGIN CONSTRUCTION OF PROPOSED ENTRANCES, CURB AND GUTTER, AND SIDEWALK. (1 MONTH)
14. COMPLETE CONSTRUCTION OF PROPOSED UTILITIES. COMPLETE FINE GRADING. STABILIZE ALL SLOPES 3:1 AND STEEPER WITH PERMANENT SEED, AND SOIL STABILIZATION MATTING IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINAL GRADES. (2 MONTHS)
15. COMPLETE CONSTRUCTION OF PROPOSED PAVEMENT (OMITTING FINAL WEAR COURSE), CURB AND GUTTER, ENTRANCES, AND SIDEWALKS. PERMANENTLY STABILIZE ALL DISTURBED AREAS. (2 WEEKS)
16. UPON STABILIZATION OF ALL CONTRIBUTING AREAS TO STORMWATER FACILITIES, COMPLETE PROPOSED STORMWATER MANAGEMENT FACILITIES, INSTALL FILTER MEDIA AND UNDERDRAINS PER THE APPROVED STORMWATER MANAGEMENT PLAN. WHEN FACILITIES ARE FINISHED, CONTRACTOR TO ENSURE THAT NO SEDIMENT LADEN WATER ENTERS THE FACILITIES.
16.1. PRIOR TO EXCAVATION CONTRACTOR TO:
16.1.1. VERIFY SEDIMENT AND EROSION CONTROL FEATURES ARE IN PLACE TO PREVENT SEDIMENT INFLOW.
16.1.2. VERIFY ALL FLAGGING REQUIRED IN THE AREA OF SENSITIVE AREA PROTECTION.
16.1.3. VERIFY GRADING IS ACCURATELY STAKED-OUT AND RE-STAKED AS NEEDED. FACILITY DIMENSIONS SHALL BE VERIFIED AND SOILS CHECKED FOR INFILTRATION.
16.1.4. VERIFY SCARIFICATION OF INVERT AS NEEDED.
16.1.5. VERIFY CONTRIBUTING AREA IS PERMANENTLY STABILIZED. VERIFY THAT WATER IS NOT PRESENT.
16.1.6. VERIFY THAT COMPACTION OF FACILITY BASE IS MINIMIZED.
16.1.7. VERIFY THAT THE CONTRIBUTING DRAINAGE AREA IS PAVED, ALL BUILDINGS BUILT, AND ALL DISTURBED AREAS SUPPORTING A 2" STAND OF DENSE GRASS.
16.2. CONTRACTOR TO CONTACT INSPECTING ENGINEER 72 HOURS BEFORE INSTALLATION OF STORMWATER MANAGEMENT FACILITIES TO COMPLETE CONSTRUCTION OBSERVATION /VERIFICATION AS NOTED IN SEQUENCE ITEMS 3 THROUGH 6 BELOW.
16.3. CONTRACTOR TO VERIFY SIZE, MATERIAL, LOCATION, AND ELEVATIONS OF OUTFALL STRUCTURE AND PIPES. VERIFY PIPE JOINTS ARE SEALED. VERIFY THAT ALL STORM DRAINS ARE CONSTRUCTED AND ALL SEDIMENTS ARE REMOVED INCLUDING ACCUMULATED SEDIMENTS IN THE SWM FACILITIES.
16.4. LOCATION, SIZE AND MATERIAL OF UNDERDRAIN AND OBSERVATION WELLS SHALL BE VERIFIED PRIOR TO STONE PLACEMENT. VERIFY PIPE ENDS CAPPED. VERIFY 3" M-6 STONE GRAVEL COVER.
16.5. VERIFY INSTALLATION OF FILTER FABRIC ON THE SIDES. VERIFY BOTTOM LAYER MATERIAL AND THICKNESS. VERIFY PEA GRAVEL AND SAND LAYER MATERIAL AND THICKNESS. VERIFY TOP FILTER MEDIA LAYER. VERIFY MULCH LAYER.
16.6. VERIFY INSTALLATION OF RIPRAP PAD IS FLUSH WITH TOP OF FILTER MEDIA.
16.7. VERIFY SITE TOP SOILED, SEEDED AND MULCHED. VERIFY LOCATION, SIZE, TYPE, AND NUMBER OF PLANTED LANDSCAPE MATERIAL. VERIFY NO MORE THAN 1/8 INCH ROOT BALL EXPOSED. VERIFY PLANTING STOCK KEPT MOIST DURING ON-SITE STORAGE.
16.8. VERIFY A MINIMUM OF 2" DENSE GRASS ESTABLISHED ON ALL SIDE SLOPES.
17. COMPLETE PERMANENT STABILIZATION, LANDSCAPING, HARDSCAPING, FINAL WEAR COURSE AND STRIPING OF PAVEMENT AREAS. (2 WEEKS)
18. SUBMIT NOTICE OF TERMINATION AND PROCESS PERMITS CLOSURES AND BOND RELEASES. (1 WEEK)
19. UPON COMPLETION, AND STABILIZATION OF SITE WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS. ENSURE PROPOSED GRADES ARE MAINTAINED ONCE EARTH DIKES ARE REMOVED. (1 WEEK)

- 1. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
a) THREE CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
b) SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
2. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION AT THE FOLLOWING STAGES OF THE PROJECT:
a) PRIOR TO THE START OF EARTH DISTURBANCE
b) UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING
c) PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT; AND
d) PRIOR TO THE REMOVAL OF SEDIMENT CONTROL PRACTICES.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN CONTINUOUS COMPLIANCE WITH THE LATEST VERSION OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
4. ALL UTILITIES, SUCH AS STORM DRAIN, PUBLIC WATER, SANITARY SEWER, ELECTRIC POWER, TELEPHONE, CABLE AND GAS LINES THAT ARE NOT IN PAVED AREAS AND ARE NOT UNDERGOING ACTIVE GRADING SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 3 DAYS OF INITIAL DISTURBANCE.
5. THE OWNER/DEVELOPER OR THEIR DESIGNATEE IS RESPONSIBLE FOR CONDUCTING ROUTINE INSPECTIONS AND REQUIRED MAINTENANCE. THE SITE AND CONTROLS SHOULD BE INSPECTED WEEKLY AND THE NEXT DAY AFTER EACH RAIN EVENT. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SUITABLE AREA AND SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED.
6. ALL DISTURBANCES FROM SECONDARY UTILITIES SUCH AS PHONE, CABLE, ELECTRIC CABLE, TV CABLE, ETC. WILL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO BRING WORK AREA BACK TO GRADE LEVEL THAT WAS EXISTING AND SEED AND MULCH ANY DISTURBANCE FROM INSTALLATION OF LINES OR CONDUIT.
7. SUBCONTRACTORS WILL BE RESPONSIBLE FOR RE-INSTALLING OR REPAIRING ANY SILT FENCE OR SEDIMENT CONTROLS THAT WERE EXISTING TO MAINTAIN PROPER SEDIMENT CONTROL THAT MIGHT HAVE BEEN DAMAGED.
8. ALL DISTURBED AREAS TO BE SEEDED WITHIN 14 DAYS OF INITIAL GRADING. FOR TEMPORARY SEEDING SPECIFICATIONS, SEE SECTION B-4-4. 2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE.
9. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AT THE INITIATION OF GRADING.
10. ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 14 DAYS OF INITIAL BACKFILL.
11. ELECTRIC POWER, TELEPHONE AND GAS LINES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 14 DAYS AFTER INITIAL BACKFILL.
12. ALL EARTH BERMS AND SEDIMENT DAMS ARE TO BE MULCHED AND SEEDED (SEE SECTION C-1 OF ABOVE REFERENCE) WITHIN 7 DAYS AFTER GRADING. ALL SOIL STOCKPILES ARE TO BE MULCHED AND SEEDED WITHIN 14 DAYS.
13. DURING CONSTRUCTION, ALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IF NECESSARY. SEDIMENT TO BE REMOVED TO A SUITABLE DISPOSAL AREA AND STABILIZED WITH PERMANENT VEGETATIVE COVER. (SEE SECTION B-4-5 OF 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, NATURAL RESOURCES CONSERVATION SERVICE, AND THE STATE SOIL CONSERVATION COMMITTEE). CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT AND EROSION CONTROL MEASURES UNTIL DISTURBED AREAS ARE STABILIZED.
15. AFTER FINE GRADING, ALL DISTURBED AREAS ARE TO BE PERMANENTLY MULCHED AND SEEDED (SEE SECTION B-4-5).
16. NO SLOPE SHALL BE GREATER THAN 2:1.
17. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THIS DOES NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO INSURE THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."
18. ALL DEBRIS THAT WILL BE HAULED OFF-SITE SHALL BE TAKEN TO AN APPROVED SITE.

**UTILITY NOTES**

- 1. NO STOCKPILING ALLOWED ON ASPHALT.
2. ALL STOCKPILES LEFT AT THE END OF THE DAY NEED TO BE STABILIZED UNTIL THE NEXT REDISTURBANCE.
3. DISTURBANCE OUTSIDE OF LOD CANNOT EXCEED 5,000 SQUARE FEET.
4. PLACE ALL EXCAVATED MATERIAL ON HIGH SIDE OF TRENCH.
5. ONLY DO AS MUCH WORK AS CAN BE DONE IN ONE DAY SO BACKFILLING, FINAL GRADING, SEEDING, AND MULCHING CAN OCCUR.
6. ANY SEDIMENT CONTROL MEASURES DISTURBED BY CONSTRUCTION WILL BE REPAIRED THE SAME DAY.

**SECONDARY UTILITY NOTES**

- 1. ANY DISTURBANCE FROM SECONDARY UTILITIES SUCH AS PHONE CABLE, ELECTRIC CABLE, TV CABLE, ETC. WILL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO BRING WORK AREA BACK TO GRADE LEVEL THAT WAS EXISTING AND SEED AND MULCH ANY DISTURBANCE FROM INSTALLATION OF LINES OR CONDUIT.
2. SUBCONTRACTORS WILL BE RESPONSIBLE FOR RE-INSTALLING OR REPAIRING ANY SILT FENCE OR SEDIMENT CONTROLS THAT WERE EXISTING TO MAINTAIN PROPER SEDIMENT CONTROL THAT MIGHT HAVE BEEN DAMAGED.

**STOCKPILE NOTES**

- 1. NO STOCKPILING ALLOWED ON ASPHALT.
2. ALL STOCKPILES LEFT AT THE END OF THE DAY NEED TO BE STABILIZED UNTIL THE NEXT RE-DISTURBANCE.

**Owners/Developer Certification:**

"I hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Signature of James Foster, Managing Member, dated 04/09/2024.

**Design Certification:**

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Jeff Smith, P.E., dated 04/09/2024.

**Howard SCD Signature Block:**

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
Designed by Alexander Bratekic, dated 5/8/2024.



3904 BOSTON STREET, SUITE 202
BALTIMORE, MD 21224
CONTACT: JEFF SMITH, P.E.
PHONE: 443-743-3470
WWW.KIMLEY-HORN.COM

GLOBAL NOVARE, INC.
P.O. BOX 27006
BALTIMORE, MD 21230
PHONE: 443-668-2527

Table with columns for No., Date, and By.

6205 WATERLOO ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO: 37 PARCEL: 122
ZONING: R-SC
FIRST ELECTION DISTRICT
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000
SCALE:
DATE: 03/08/2024
DESIGNED BY: MZM
DRAWN BY: MZM
CHECKED BY: JBS



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 31373 EXP: 01/21/2025

**FINAL PLAN**

BADART SUBDIVISION
ZONING - R-SC

6205 WATERLOO RD
PREPARED FOR
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

**SESC NOTES & DETAILS**

SHEET NUMBER
18 OF 23

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.



Plotted By: Mogan, MacKenzie. Sheet: S-6205, Waterloo Rd. Layout: 18. SESC NOTES & DETAILS - March 11, 2024. 01:57:29pm. K:\REAL\DW\114033000-6205-Waterloo Road CAD\PlanSheets\FDP\14. SESC NOTES & DETAILS.dwg. This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

### DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE

**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAR SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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B.2

### DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL: MB

**CONSTRUCTION SPECIFICATIONS**

- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
- PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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C.24

### DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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E.7

### DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

**CONSTRUCTION SPECIFICATIONS**

- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 3/8 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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E.24

### DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

**CONSTRUCTION SPECIFICATIONS**

- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 3/8 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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E.25

### DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC - 0.46 lb/ft<sup>2</sup> (\* INCLUDE SHEAR STRESS)

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDBED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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B.38

### B-4.8 STANDARDS AND SPECIFICATIONS

**FOR STOCKPILE AREA**

**Definition**  
A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

**Purpose**  
To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

**Conditions Where Practice Applies**  
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

**Criteria**

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrate side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

**Maintenance**  
B.43

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

# Kimley»Horn

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BALTIMORE, MD 21224  
CONTACT: JEFF SMITH, P.E.  
PHONE: 443-743-3470  
WWW.KIMLEY-HORN.COM

GLOBAL NOVARE, INC.  
P.O. BOX 27006  
BALTIMORE, MD 21230  
PHONE: 443-668-2527

NO.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
HOWARD COUNTY, MARYLAND  
TAX MAP NO. 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000

SCALE: \_\_\_\_\_

DATE: 03/08/2024

DESIGNED BY: MZM

DRAWN BY: MZM

CHECKED BY: JBS

Howard SCD Signature Block:

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

DocuSigned by:  
Alexander Bratchik 5/8/2024  
Howard Soil Conservation District Date

**Owners/Developer Certification:**

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Owner's/ Developer's Signature: \_\_\_\_\_ Date: 04/09/2024  
James Foster, Managing Member  
Printed Name & Title

**Design Certification:**

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Designer's Signature: \_\_\_\_\_ Date: 04/09/2024  
Jeff Smith, P.E.  
Printed Name  
MD Registration No. 31373  
P.E., R.L.S., or R.L.A. (circle one)

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 31373 EXP: 01/21/2025

## FINAL PLAN

BADART SUBDIVISION  
ZONING - R-SC

6205 WATERLOO RD  
PREPARED FOR  
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

## SESC NOTES & DETAILS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
County Health Officer \_\_\_\_\_ Date \_\_\_\_\_  
Howard County Health Department

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
(H) Edmondson 5/9/2024  
Chief, Development Engineering Division Date  
5/8/2024  
Chief, Division of Land Development Date  
5/9/2024  
Director \_\_\_\_\_ Date

SHEET NUMBER  
19 OF 23

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.







Plotted By: Moagan, Maccenzie - Street: 6205 Waterloo Rd - Layout: 21 - SWM LANDSCAPE NOTES AND DETAILS - March 11, 2024 - 01:57:58pm - K:\BAL-CIV\144033000-6205-Waterloo Road\CAD\PlanSheets\FDP\19-LANDSCAPE PLAN.dwg - This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

GENERAL NOTES

- 1. Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation.
2. Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation.
3. Planting beds and individual tree plantings shall be mulched continuously as specified.
4. Prior to construction the contractor shall be responsible for locating underground utilities and execute work in a manner that avoids damage to utilities during the course of work.
5. Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation.
6. Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings and turf areas for one (1) calendar year from date of certificate of occupancy.
7. Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon.
8. Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken.
9. All material including planting operation appurtenances shall be of domestic origin manufacture and sourced within 100 miles of the project site.
10. Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

PERFORMANCE SPECIFICATION

- I. PLANTS
A. General
1. Live healthy plants free of dead branches and parts
2. Free of disease, insect, injury and damage
3. Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired damage.
4. Free of girdling roots or rootbound/circling container conditions
5. Plants of consistent in growth habit and healthy character
6. Free of compromising growth conditions such as weak crotch connections, crossed branches, snags and scars
7. Point of origin growing location within 100 miles of project site
8. Graded, standards, caliper, sizes and stock consistent with ANSI Z60.1, American Standard for Nursery Stock most current edition
9. Species identified consistent with Hortus Third: Concise Dictionary of Plants Cultivated in the United States and Canada, most current edition and Manual of Woody Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, most current edition
10. All disturbed areas shall be grass seed unless otherwise identified on landscape plans

- B. Trees:
1. Deciduous Single Trunk
a. Full, straight and upright with consistent symmetrical natural branching pattern throughout
b. Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local jurisdiction
2. Deciduous Multi-Trunk
a. Full and upright with straight consistent symmetrical natural branching pattern throughout
b. Canes evenly spaced and of similar growth habit
c. Free of suckers and extraneous branching
3. Evergreen Single-Trunk
a. Full and upright with continuous symmetrical dense natural habit
b. Clear branching height twelve (12) inches above top of rootball
c. Free of suckers and extraneous branching
d. Do not shear or otherwise prune to shape plantings

- C. Evergreen and Deciduous Shrubs
1. Full, dense and naturally symmetrical.
2. Consistent with container and/or balled and burlapped size
3. Free of suckers and extraneous branching
4. Do not shear or otherwise prune or shape plantings

- D. Evergreen and Deciduous Groundcover
1. Full and dense in pots or flats

- E. Perennials and Seasonal Color
1. Full and dense in pots or flats

- F. Turf Grass
1. Subgrade
a. Soil Mix-10% Compost, 90% topsoil by volume
b. Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials including litter, stones, sticks and all items greater than 3/4 inch in any dimension
c. Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown on drawings. Allow for thickness of sod when applicable
2. Grass Sod
a. Install not longer than twenty-four (24) hours from harvest
b. Grass bed not less than two (2) inches in continuous thickness
c. 100% continuous live sod coverage after first growing season and at end of warranty period.
d. Of uniform non-varying density and continuous texture quality capable of growth and development immediately upon installation. Weed and noxious plant free
e. Stagger installation rows and place aligned parallel to contours
f. Fill joints solidly with planting bed preparation soil
g. Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1
3. Grass Seed
a. Mix approved by the Landscape Architect
b. Provide first and new of year seed crops in mix free of weed seeds and deleterious matter
c. Provide seed mix not greater than 15% annual or perennial rye
d. Coverage 85% continuous coverage live stand after first growing season and at end of warranty
e. Replacement or overseeding mixes consistent with original application/installation
f. Provide erosion blankets or other slope retention methods as noted on drawings

- II. Materials and Appurtenances
A. Testing
1. Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review
B. Top Soil
1. Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, trash, and deleterious matter greater than 3/4 inch in any direction. Clay content shall not exceed 25%.Gravel content shall not exceed 10%. Silt shall not exceed 25%

- C. Use of Existing Topsoil
1. Existing topsoil on-site may be repurposed with prior Owner approval. Contractor shall provide soil testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

- D. Shredded Hardwood Mulch
1. 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed. Neutral Ph balance 5.5-7.5

- E. Compost Ph
1. Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

- G. Compost Testing
1. Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety requirements
2. Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

- H. Planting Mix
1. 85% topsoil and 15% Compost

- I. Fertilizer
1. Granular 10% nitrogen, 6% Phosphorus, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

- J. Herbicide
1. Product and Material Safety Data as approved by Owner

- K. Water
1. Potable only unless otherwise approved by Owner

- L. Hardwood Stakes
1. 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

- M. Tree Ties
1. Villa Non-Abrasive Rubber Tree Ties or approved equal

- N. Filter Fabric
1. Mirafi 140-N or approved equal

- O. Steel Edging
1. 1/8-inch x 4-inch in full sections. Ryerson, Timec or approved equal with integral stakes. No open corners. Corners shall be formed and trued to compliant angle or welded closed

- P. River Stone
1. Locally sourced, river rounded, unfaceted river stone/cobbles.
2. Size shall not exceed 3 total inches in any dimension.
3. Color and texture approved by Owner
4. When placed in concrete or mortar setting bed, tamp to secure and brush clear joints.
5. Concrete or mortar as approved by owner.

III. Execution

- A. Site Conditions
1. Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable are suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting conditions.
2. Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner of acceptance prior to commencement of work.
3. Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition, access to storage/work areas, damage to conditions, etc.
4. Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks, materials delivery and/or installation and warranty responsibilities.
5. Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required work by others.

- B. Planting Seasons
Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

- 1. Deciduous and Evergreen Trees
Do not install/plant the following trees between September 15 and March 15
1. Oaks (Quercus Sp., Such as Q. rubra, Q. alba, Q. phellos, Q. coccinea)
2. Dogwood (Cornus Sp.)
3. Sweetgum (Liquidambar Sp.)
4. All Conifers and Evergreens except White Pine (Pinus strobus Sp.)

- 2. Deciduous and Evergreen Shrubs
a. Install/plant between March 15 and June 15 and/or September 15 and November 30

- 3. Perennials
a. Install/plant between March 15 and June 15 and/or September 15 and November 30

- 4. Spring Flowering Bulbs
a. Install/plant between September 15 and December 15

- 5. Seasonal Annuals
a. Install/plant in season per approved schedule

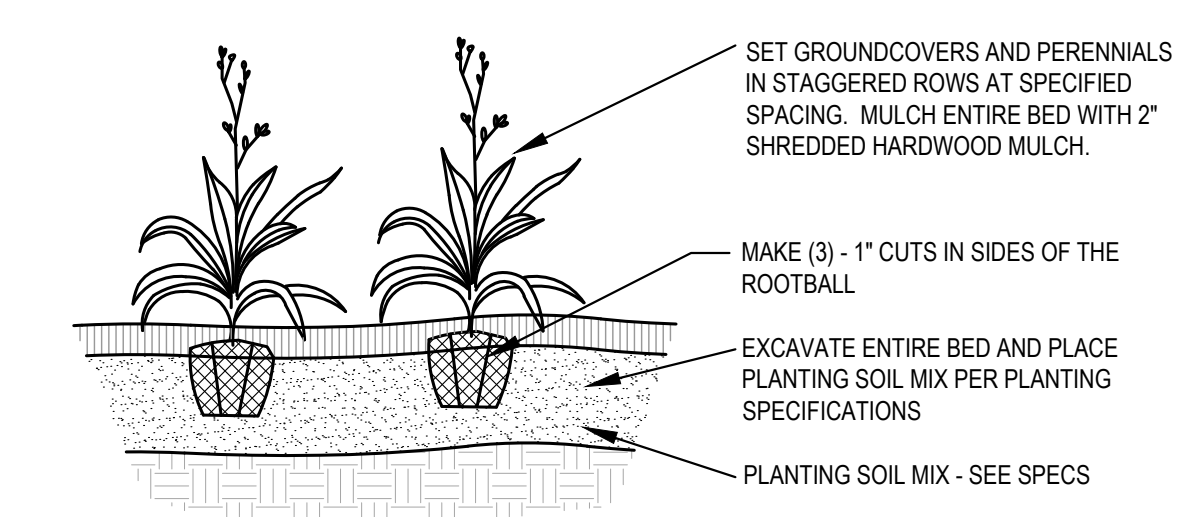
- 6. Turf Grass
a. Install/plant between March 15 and May 15 and/or September 15 and November 30
b. Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

- 7. No Plant Installation
a. Do not install plantings or turf grass between June 15 and September 15, without approval by Owner

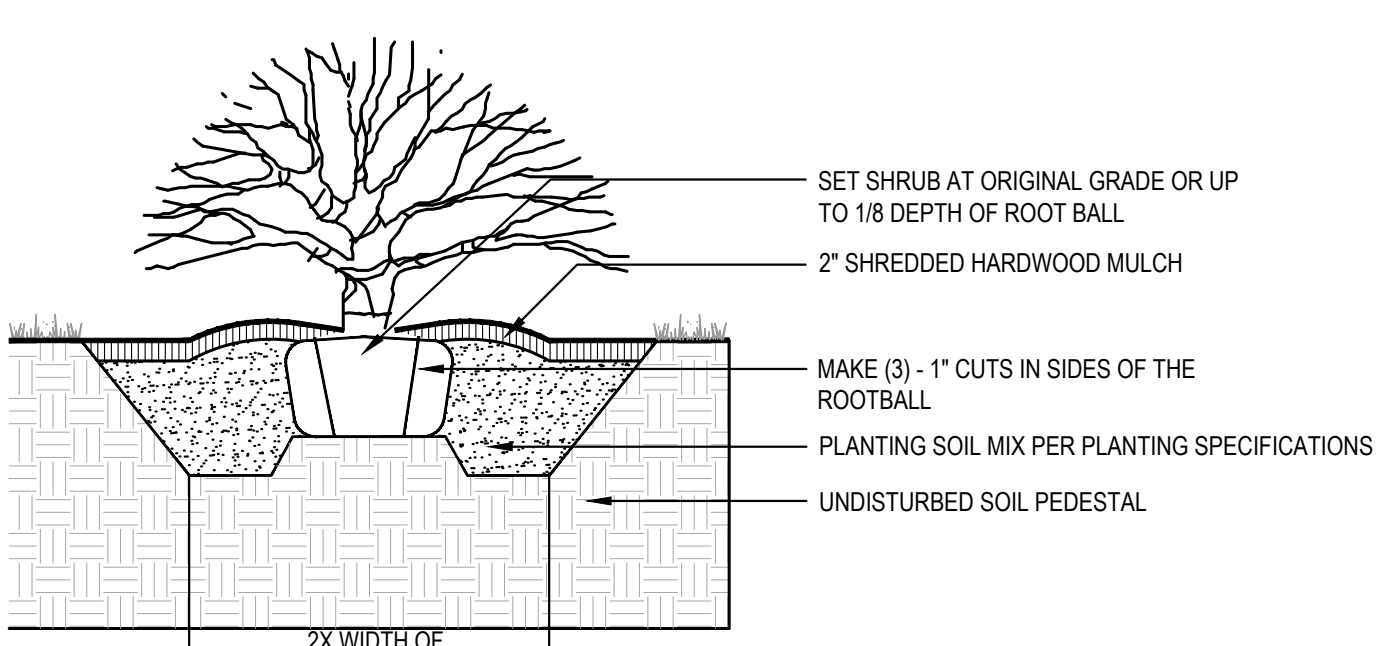
- C. Positioning & Location of Plantings
1. Position plants to show the most-prominent and well-formed face to most-public view
2. Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning installation
3. Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

- D. Implementation
1. Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner
2. Provide project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials
3. Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work
4. Report delays due to weather or site conditions immediately upon finding. Provide recommendation for remedy of schedule delays. Do not work, place or modify frozen soil
5. Report delays due to extraordinary natural or other conditions beyond control of Contractor

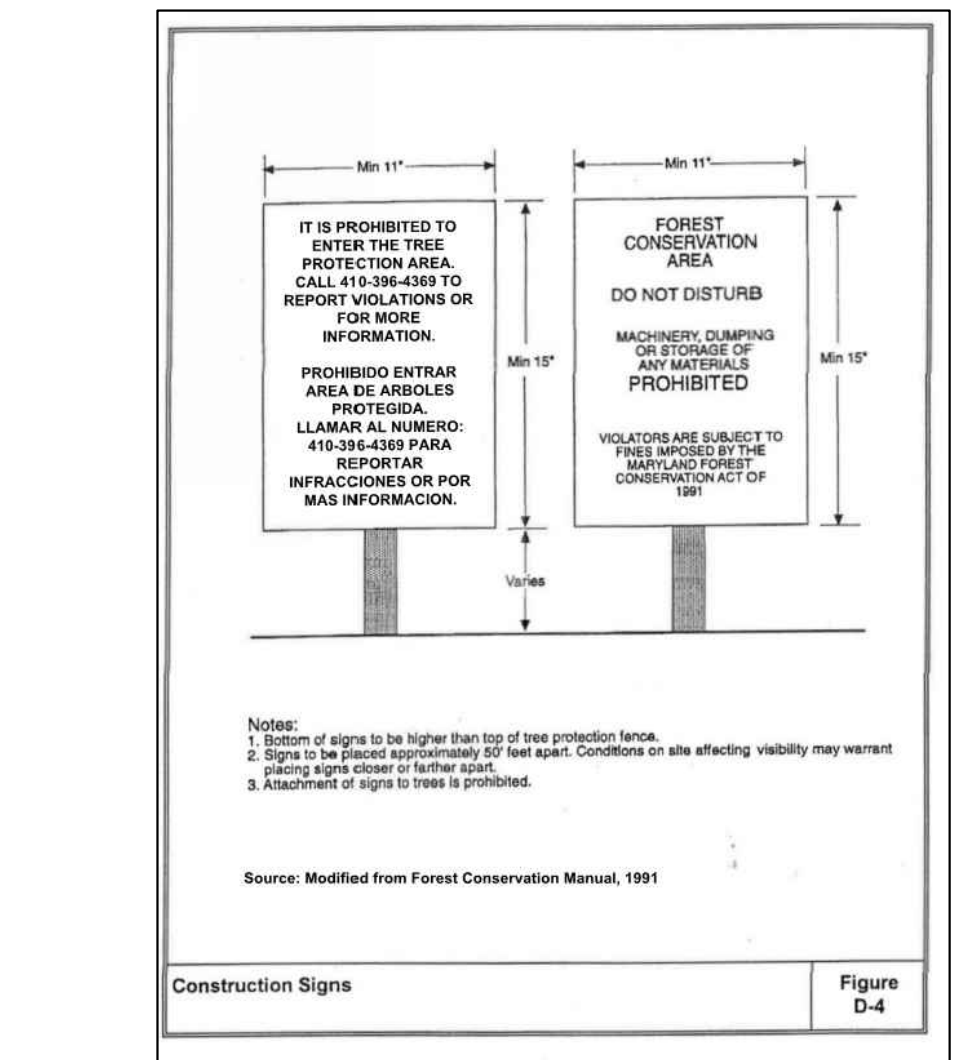
- E. Clean Up
1. Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site furnishings, etc.
2. Repair any damage to existing conditions that occurred during execution of work.
3. All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape Architect.



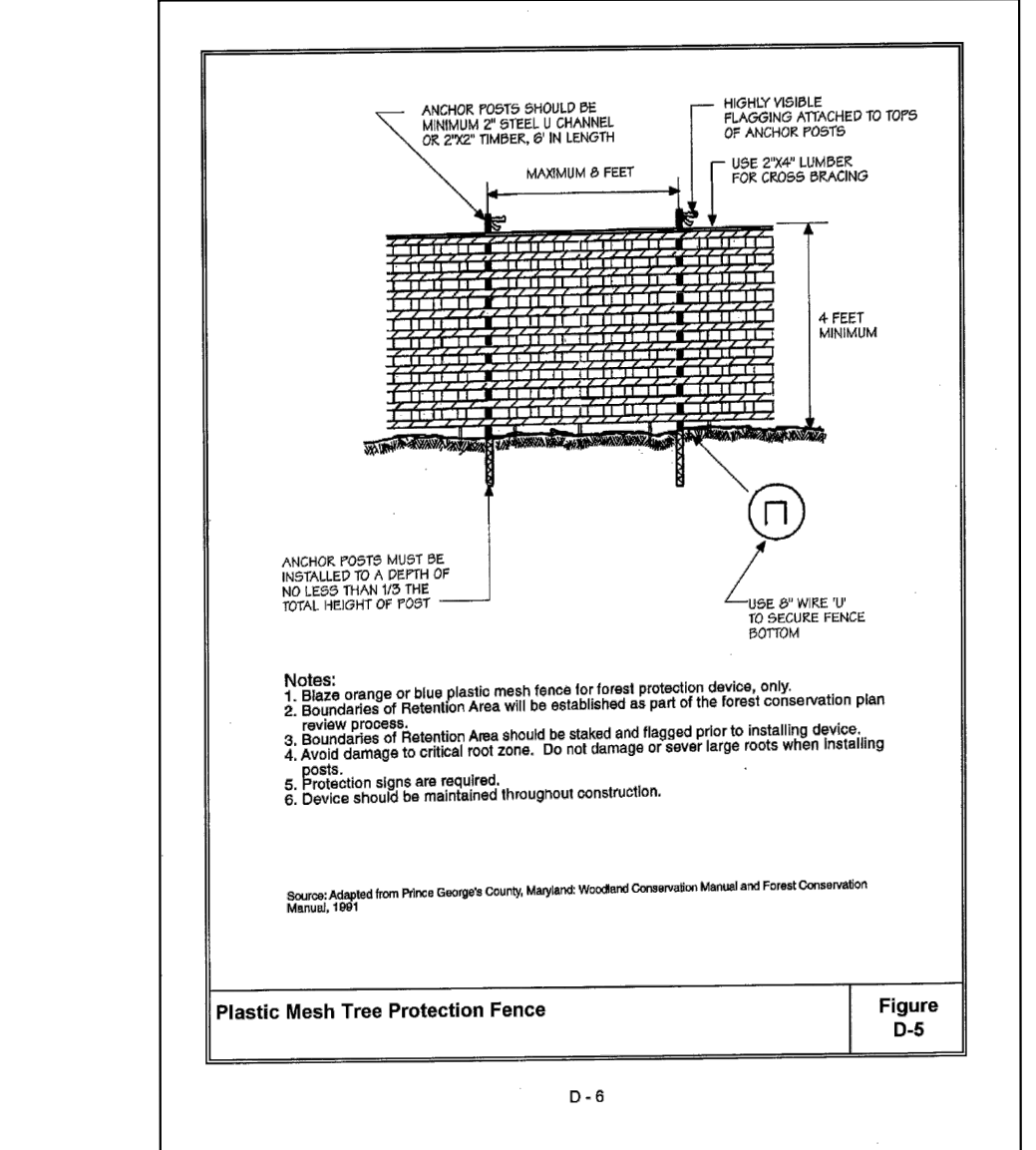
1 GROUNDCOVER PLANTING NTS



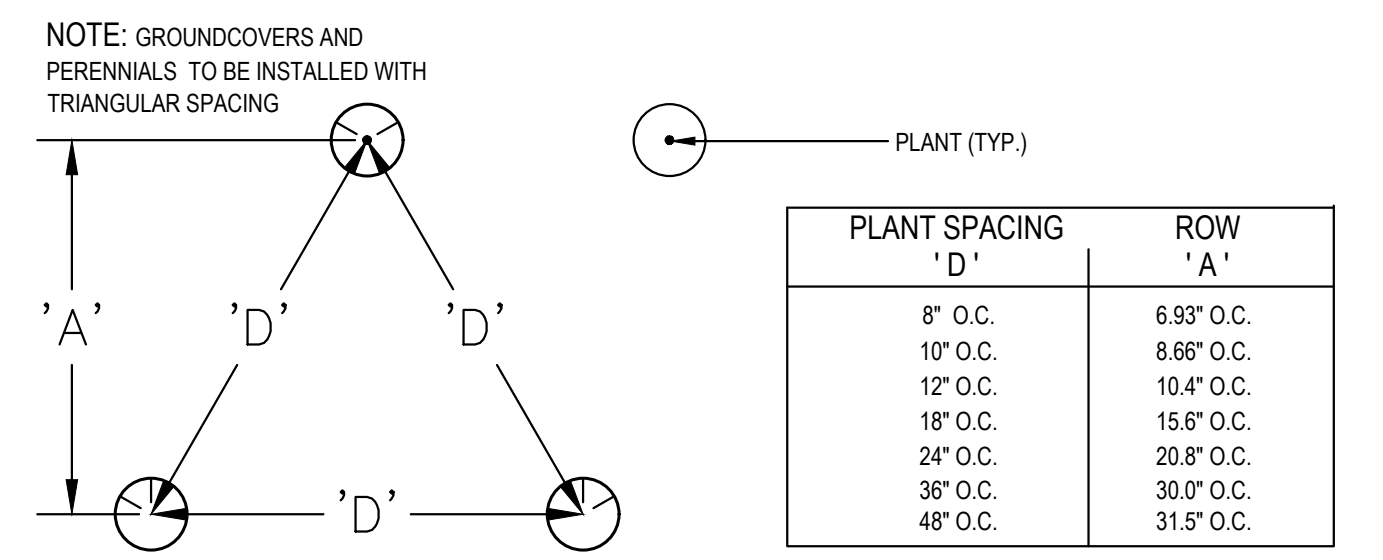
3 SHRUB PLANTING NTS



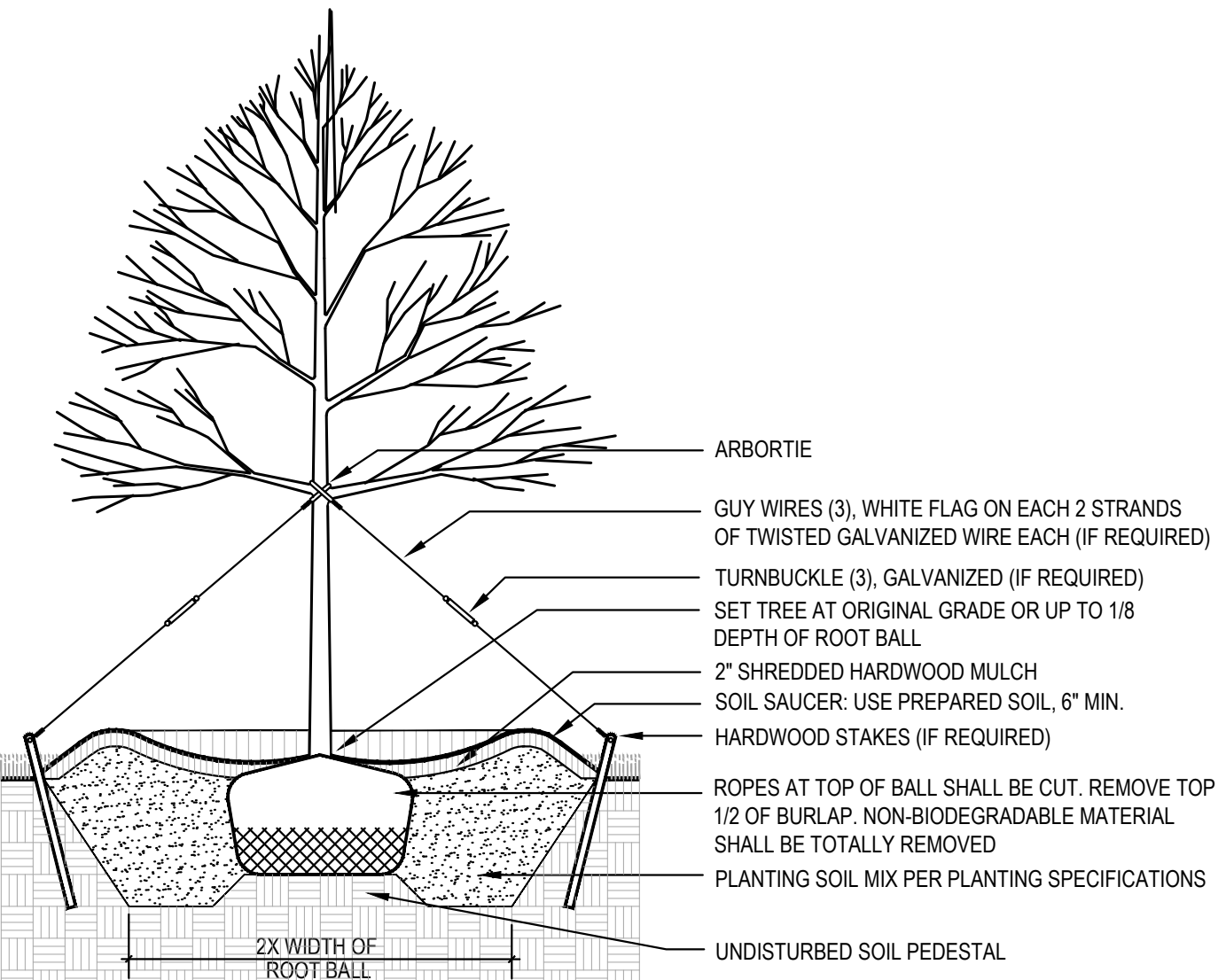
5 BILINGUAL TREE PROTECTION SIGN NTS



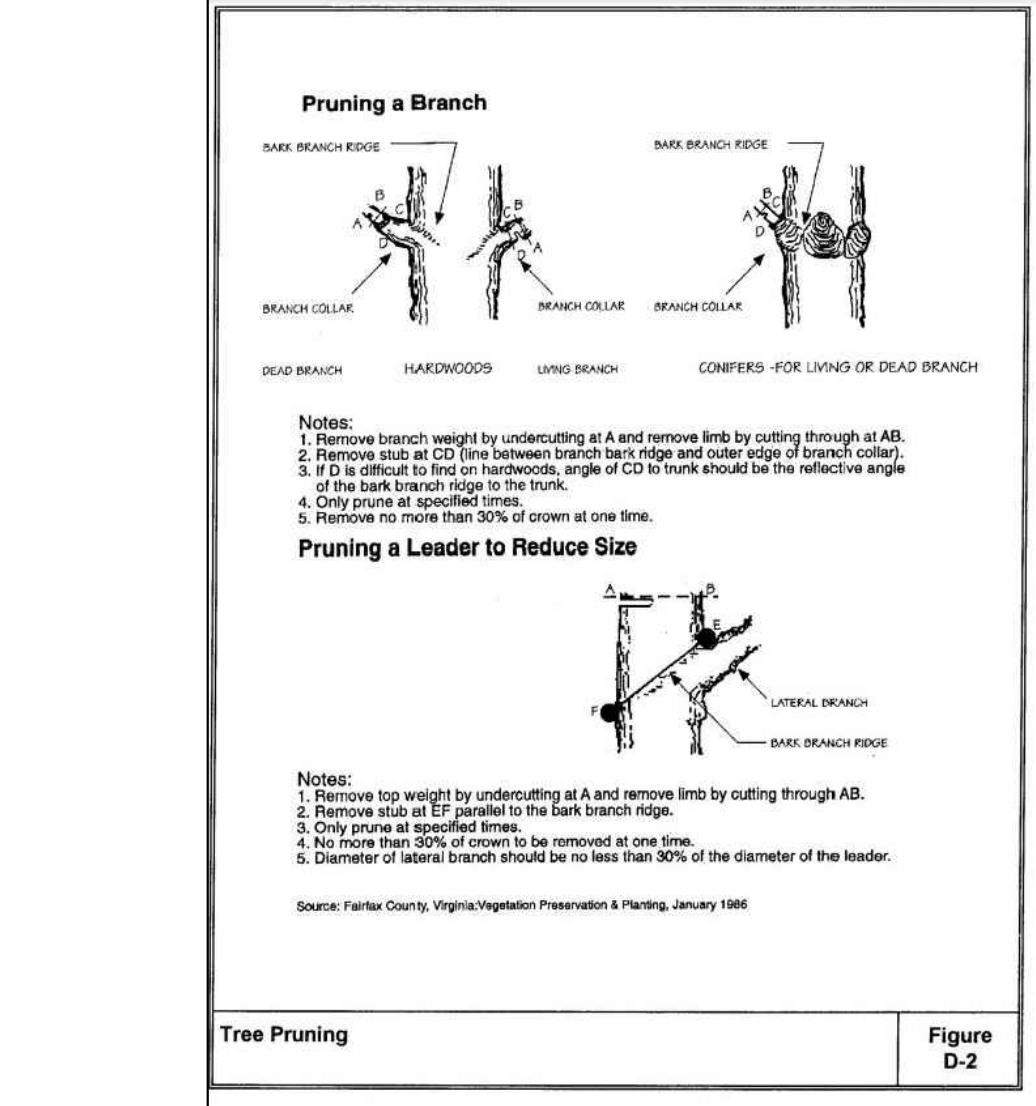
7 TREE PROTECTION FENCE NTS



2 GROUNDCOVER SPACING NTS



4 TREE PLANTING NTS



6 TREE PRUNING NTS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
County Health Officer
Howard County Health Department

APPROVED: DEPARTMENT OF PLANNING AND ZONING
(Handwritten signatures and dates)
Chief, Development Engineering Division
Chief, Division of Land Development
Director

Kimley Horn
3904 BOSTON STREET, SUITE 202
BALTIMORE, MD 21224
CONTACT: JEFF SMITH, P.E.
PHONE: 443-743-3470
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GLOBAL NOVARE, INC.
P.O. BOX 27006
BALTIMORE, MD 21230
PHONE: 443-668-2527

Table with columns: No., DATE, REVISIONS, BY

6205 WATERLOO ROAD
HOWARD COUNTY, MARYLAND
TAX MAP NO: 37 PARCEL: 122
ZONING: R-SC
FIRST ELECTION DISTRICT
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000
SCALE: 1" = ##'
DATE: 03/08/2024
DESIGNED BY: AL
DRAWN BY: TC
CHECKED BY: RC



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 4179 EXP: 10/27/2024

FINAL PLAN
BADART SUBDIVISION
ZONING - R-SC
6205 WATERLOO RD
PREPARED FOR
GLOBAL NOVARE, INC.

HOWARD COUNTY MARYLAND

SWM
LANDSCAPE
NOTES AND
DETAILS

SHEET NUMBER
21 OF 23

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Know what's below. Call before you dig.







Plotted By: M. Maccenzie - Sheet Set: 6205 - Waterloo Rd - Layout: 23 - Traffic Control Plan - PHASE II - March 11, 2024 - 01:58:20pm - K:\BAL-DVA\14033000-6205 - Waterloo Road\CAD\PlanSheets\FDP\21 - TRAFFIC CONTROL PLAN.dwg  
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No.	REVISIONS	DATE	BY

6205 WATERLOO ROAD  
HOWARD COUNTY, MARYLAND  
TAX MAP NO: 37 PARCEL: 122  
ZONING: R-SC  
FIRST ELECTION DISTRICT  
SECOND COUNCIL DISTRICT

KHA PROJECT NO.: 114033000  
SCALE: 1" = 100'  
DATE: 03/08/2024  
DESIGNED BY: MZM  
DRAWN BY: MZM  
CHECKED BY: JBS



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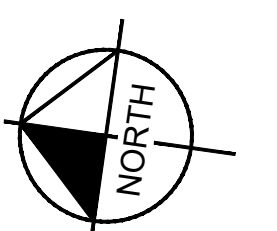
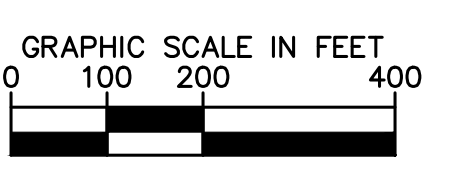
**FINAL PLAN**  
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6205 WATERLOO RD  
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HOWARD COUNTY MARYLAND

**TRAFFIC CONTROL PLAN - PHASE II**

SHEET NUMBER  
**23 OF 23**



**TRAFFIC CONTROL PLAN - PHASE II**  
SCALE: 1"=200'

**MAINTENANCE OF TRAFFIC LEGEND**

- PROPERTY LINE (LOTS 2, 3, AND 4)
- - - PROPERTY LINE (OFF-SITE)
- ROADWAY CENTERLINE
- PR TRAFFIC CHANNELIZATION DEVICE
- PR ARROW PANEL
- PR WORK AREA

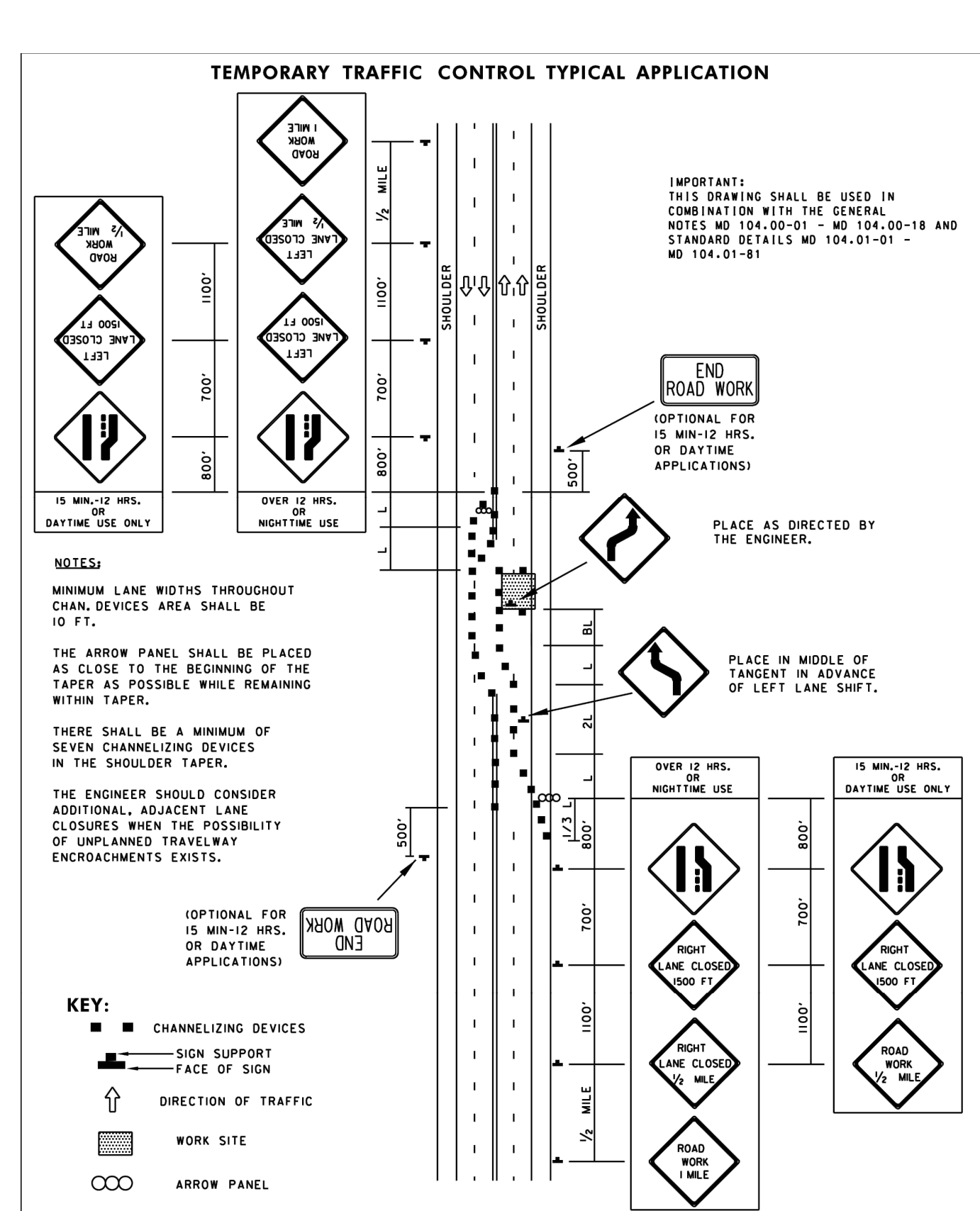
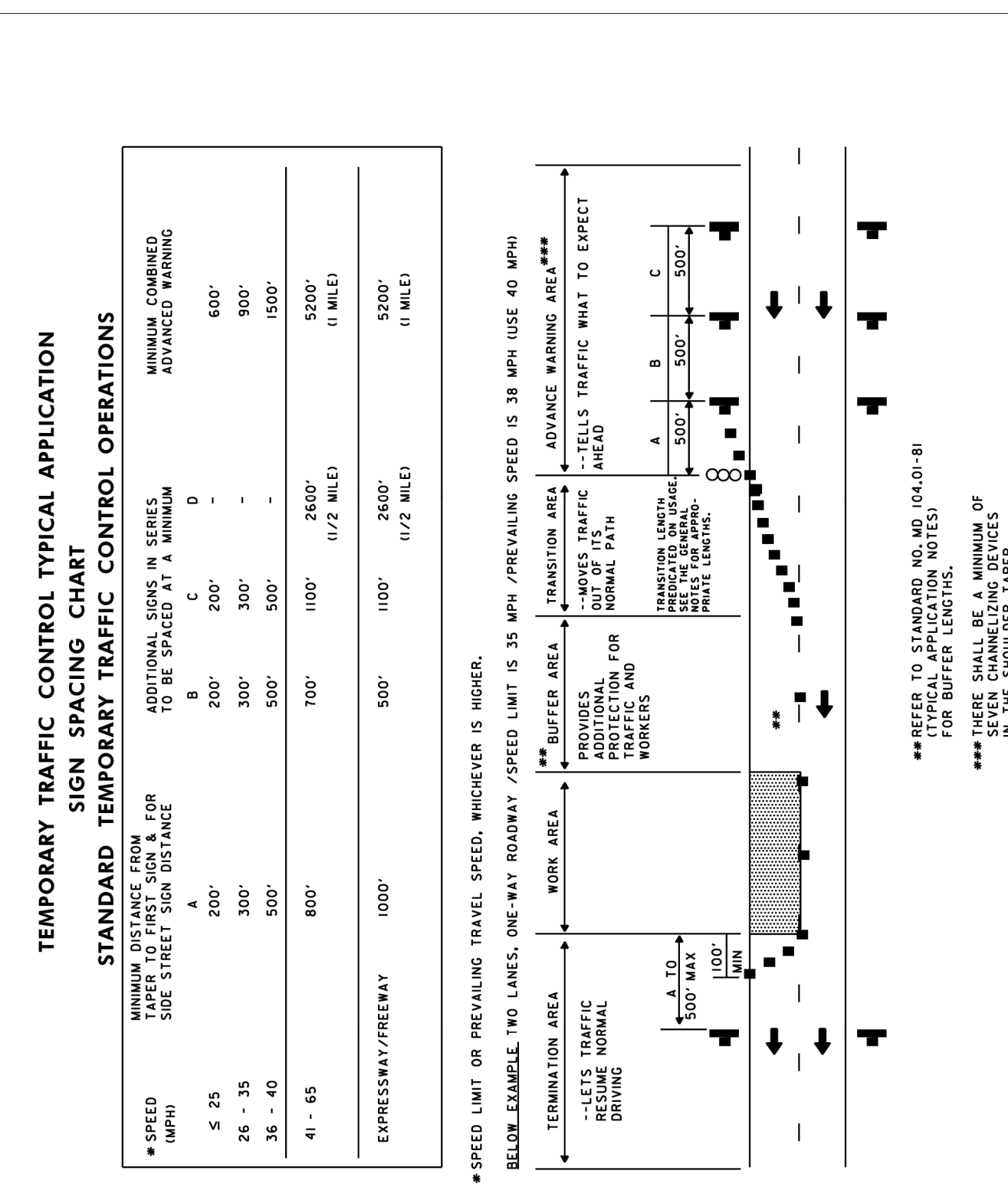
**SEQUENCE OF CONSTRUCTION - PHASE 2**

1. THIS PLAN COMMENCES AFTER THE INSTALLATION OF HALF OF THE WATER UTILITY CONNECTION UNDER THE SOUTHBOUND SIDE OF MD-108.
2. PLACE TRAFFIC CONTROL DRUMS/BARRELS AND SIGNAGE ALONG MD-108 AS SHOWN ON THIS PLAN PER DETAIL MD 104.03-07.
3. REMOVE STUB AND RESUME INSTALLATION OF WATER UTILITY CONNECTION LINE UNDER THE NORTHBOUND SIDE OF MD-108.
4. CONNECT WATER UTILITY LINE TO PROPOSED PUBLIC WATER LINE ON-SITE. REPLACE FULL DEPTH PAVEMENT WHERE DISTURBED PER SHA SPECIFICATIONS.
5. REMOVE TRAFFIC CONTROL DRUMS/BARRELS AND SIGNAGE ONCE WORK IS COMPLETED.
6. NO MAINTENANCE OF TRAFFIC PHASE IS EXPECTED TO EXCEED 3 WEEKS.
7. RESTORE TEMPORARILY CLOSED LANES FOR PEAK HOURS.

**7.0 CHANNELIZING DEVICES**

7.1 Taper Formulas:  
 $L = WS$  for speeds greater than (>) 40 mph  
 $L = WS^2/60$  for speeds equal to or less than (<) 40 mph  
 Where: L = minimum length of taper (ft)  
 S = numerical value of prevailing travel speed or speed limit (MPH), whichever is higher, prior to work starting,  
 W = width of offset (ft)

7.2 Maximum spacing between channelizing devices:  
 Taper Channelization - Shall be equal in feet to the posted speed limit for posted speeds eq/less than 40 mph and 40 feet for posted speeds greater than 40 mph.  
 Tangent Channelization - Shall be equal in feet to twice the posted speed limit in the buffer and equal in feet to the posted speed adjacent to the work area for posted speeds eq/less than 40 MPH. Spacing shall be 80 feet in the buffer and 40 feet adjacent to the work area for posted speeds greater than 40 MPH.



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 County Health Officer  
 Howard County Health Department  
 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 3/9/2024  
 Chief, Development Engineering Division  
 Date  
 5/8/2024

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 5/9/2024  
 Chief, Division of Land Development  
 Date  
 5/9/2024  
 Director

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Maryland Department of Transportation  
**STATE HIGHWAY ADMINISTRATION**  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**GENERAL NOTES**  
 STANDARD NO. MD 104.00-09

Maryland Department of Transportation  
**STATE HIGHWAY ADMINISTRATION**  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**SIGN SPACING CHART**  
 STANDARD NO. MD 104.01-02

Maryland Department of Transportation  
**STATE HIGHWAY ADMINISTRATION**  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**PARTIAL ROADWAY CLOSURE/MULTILANE UNDIV. GREATER THAN 40 MPH**  
 STANDARD NO. MD 104.03-07